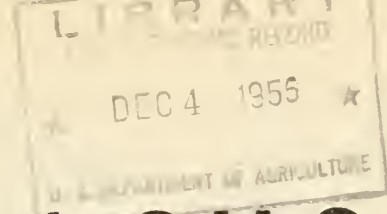


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The FATS and OILS SITUATION

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SUMMARY

A supply of food fats and oils about the same as last year's record level is in prospect for 1956-57. Smaller carryover stocks on October 1, 1956 are expected to be offset by increased output during the marketing year. Supplies of butter and lard will be smaller but those of the vegetable oils will be larger.

Export prospects for food fats and oils through September 1957 appear bright. In fact, with foreign countries continuing to need substantial quantities of food fats and oils exports may be as large as the record 2.7 billion pounds, including the oil equivalent of oil-seeds but excluding butter, for the year just ended. However, if the crisis in the Near-East should be prolonged, export demand for U. S. fats and oils could strengthen further.

The 1956 crop of soybeans is estimated at a record 457 million bushels, 86 million more than last year. Crushings and exports may reach 410 million bushels compared with 350 million last year. If 30 million bushels are used on farms, this would leave a carryover of about 20 million bushels. The season average farm price probably

(Continued on page 3)

Table 1.- Wholesale prices per pound for fats, oils, and glycerin at specified markets

Item	October		1956		
	1954	1955	August	September	October
	Cents	Cents	Cents	Cents	Cents
Babassu oil, tanks, New York	---	15.2	---	---	---
Butter, creamery, Grade A (92-score) bulk, New York	60.9	58.6	60.1	60.9	62.3
Butter, creamery, Grade B, (90-score) bulk, Chicago	57.8	57.4	58.0	58.0	60.0
Castor oil, dehydrated, tanks, New York	21.6	20.8	24.1	24.1	24.4
Castor oil, No. 1, tanks, f.o.b. New Jersey mills	17.0	16.2	19.5	19.5	19.8
Castor oil, No. 3, technical, drums, carlots, f.o.b. N.Y.	17.8	15.5	17.3	17.3	17.6
Coconut oil, crude, tank cars, Pacific Coast, f.o.b. mill 1/ ..	15.7	14.2	13.9	13.9	13.8
Coconut oil, crude, tanks, Atlantic ports (tax included)	16.5	15.5	15.0	15.0	15.1
Coconut oil, Cochin type, refined, drums, N.Y. (tax included)..	20.3	19.5	20.2	19.0	19.0
Cod oil, Newfoundland, drums, New York	9.4	11.0	12.0	11.9	11.6
Codliver oil, medicinal, U.S.P., barrels, New York	19.5	19.5	18.9	18.9	18.9
Corn oil, crude, tank cars, f.o.b. Midwest mills	13.4	12.1	12.3	12.1	13.6
Corn oil, refined, drums, New York	20.6	19.2	19.2	19.2	19.6
Cottonseed oil, crude, tank cars, f.o.b. S.E. mills	12.8	11.3	12.3	12.0	13.3
Cottonseed oil, p.e.y., bleachable, tank cars, New York 2/ ...	14.8	13.5	14.3	14.2	15.5
Cottonseed-oil foots, raw (50 percent T.F.A) delivered East ..	1.6	1.9	1.7	1.7	1.9
Cottonseed oil, refined, drums, New York	20.5	19.1	19.0	19.0	19.2
Degras, common, barrels, New York	10.0	11.0	---	---	---
Glycerin, soaplye, basis 80 percent, tanks, New York	21.0	20.0	16.4	16.0	15.0
Grease, A white, tank cars, f.o.b. Chicago	6.6	7.8	6.3	6.9	6.8
Grease, yellow, tank cars, f.o.b. Chicago	5.8	7.1	5.5	5.8	5.8
Lard, loose, tank cars, Chicago	14.2	10.7	11.3	11.7	12.5
Lard, prime steam, tierces, Chicago	16.5	11.8	11.5	11.4	11.9
Lard, refined, 1-pound cartons, Chicago	19.2	15.3	16.0	16.4	16.9
Linseed oil, raw, tank cars, Minneapolis	14.5	13.0	13.0	12.7	13.1
Linseed oil, raw, drums, carlots, New York	17.2	16.0	16.3	16.0	16.4
Margarine, white, domestic vegetable, Chicago	25.5	26.0	26.0	26.0	26.2
Menhaden oil, light pressed, tanks, New York	10.6	10.6	12.0	12.0	11.5
Neat's-foot oil, 30°, drums, carlots, New York	30.0	30.0	28.0	28.0	28.0
Oiticica oil, drums, f.o.b. New York	16.5	14.8	16.4	15.9	15.8
Oleo oil, extra, drums, New York	19.5	14.8	18.3	18.3	18.3
Oleostearine, barrels, New York	13.5	11.6	11.4	11.4	12.9
Olive oil, imported, edible, drums, New York	30.4	32.0	46.0	45.3	44.7
Olive oil foots, domestic, drums, carlots, New York	---	---	---	---	---
Palm oil, Congo, drums, f.o.b. New York 3/	12.4	13.0	15.5	15.1	14.9
Peanut oil, crude, tank cars, f.o.b. S.E. mills	21.1	17.5	13.6	13.1	15.6
Peanut oil, refined, drums, New York	28.3	24.2	19.6	19.5	19.9
Rapeseed oil, refined (denatured), tanks, New York	17.2	15.8	22.7	22.1	19.5
Sardine oil, crude, tanks, Pacific Coast	---	8.8	8.5	8.5	8.5
Sesame oil, refined, drums, New York	36.0	36.0	38.0	38.0	38.0
Soybean oil, crude, tank cars, f.o.b. Midwest mills	12.1	10.9	11.4	11.3	12.5
Soybean oil, refined, drums, New York	19.3	17.3	17.0	16.2	16.6
Shortening, containing animal fat, 1-pound cartons, Chicago ..	28.5	26.8	30.0	29.9	29.8
Shortening, cottonseed, hydrogenated, 10-drum lots, New York ..	23.3	19.8	23.0	21.8	22.1
Sperm oil, natural, 45°, drums, New York	15.0	16.5	15.8	15.8	15.8
Tall oil, refined, tanks, works	5.0	5.2	5.2	5.2	5.2
Tallow, edible, loose, Chicago	11.6	9.5	9.3	10.3	12.3
Tallow, inedible, packers' prime, tank cars, f.o.b. Chicago ..	6.7	7.8	6.3	6.7	6.8
Tallow, No. 1, inedible, Chicago	6.1	7.2	5.7	6.2	6.1
Tung oil, imported, drums, carlots, f.o.b. New York	23.5	26.8	25.3	24.9	23.8
Tung oil, tanks, New York	22.0	25.2	23.8	23.3	22.3

1/ Three-cent processing tax added to prices as originally quoted.

2/ Near-by futures.

3/ Tax excluded. Tax does not apply to palm oil used in the manufacture of iron or steel products, tin andterne plate. Since 1943 these are the major uses of palm oil.

Prices compiled from Oil, Paint, and Drug Reporter; The National Provisioner; The Journal of Commerce (New York); Wall Street Journal, Chicago edition; reports of Bureau of Labor Statistics, and reports of Commodity Stabilization Service. Excise taxes and duties included where applicable.

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will be near the national support price of \$2.15. Because of large supplies, only a moderate seasonal rise in soybean prices is expected in late winter or spring unless foreign demand becomes exceptionally great.

Cottonseed production in 1956 is placed at 5,431,000 tons, 10 percent less than last year and the smallest since 1950. Farm prices this crop year probably will average near the current level of around \$50 per ton, which is substantially above the support level.

The peanut crop is estimated at 1,489 million pounds, 5 percent less than last year. However, carryover stocks were up, so the total supply is nearly the same as last year. The supply is greater than required for edible and farm uses and a substantial quantity will be available for crushing, exports, and carryover stocks at the end of the year. Season average prices

to farmers in the Virginia-Carolina and Southeast areas are likely to be near the loan value while the relatively small Southwest crop will average somewhat above the loan value.

Flaxseed production in 1956 is estimated at 52 million bushels, compared with about 32 million bushels needed domestically for oil, seed and feed. Flaxseed prices to farmers have averaged near the support price to date in this crop year and probably will continue to do so.

The tung nut crop was again damaged by freeze in 1956 and oil production is unofficially reported by trade sources at about 25 million pounds. Domestic uses in recent years have averaged 50 million pounds. For consumption in 1956-57 to be maintained at this level about 25 million pounds would need to be imported. The average farm price probably will at least about equal the 1956 support price of \$53.76 per ton.

Lard output in 1956-57 is expected to be about 8 percent less than last year. Prices will average somewhat higher than last year because of smaller supplies. Since the difference between prices of lard and the vegetable oils may not be as wide as in the past year, there probably will be less incentive to use lard in shortening. Exports of lard in 1956-57 might not fully reach their very high level of 1955-56.

Output of inedible tallow and greases in 1956-57 will be down from the record 3.1 billion pounds last year, reflecting the drop in hog slaughter. As little change in domestic disappearance is expected, prices in 1956-57 to a large extent will again depend upon export demand, which is expected to be strong.

The longer-term (5 year) outlook for food fats and oils points to a possible expansion of U. S. production at a rate greater than the increase in domestic use. Production could possibly increase as much as 15 percent from 1956 to 1961 while total domestic use will likely increase only about 7 to 8 percent. Under these circumstances, foreign markets would become even more important as an outlet for U. S. fats and oils. On the basis of its recent share of the world trade, the U. S. should be able to market this increased output abroad. Lard production is expected to increase moderately, reflecting a somewhat larger slaughter of hogs by 1961. Butter and cottonseed oil production are not expected to change materially from current levels. Soybean production probably will continue to trend upward, accounting for most of the increase in total output, and in 1961 will represent a considerably larger proportion than now of the total food fats and oils.

REVIEW OF HISTORICAL TRENDS

This year's fats and oils outlook focuses not only on the situation for 1957 but on the 5 year outlook. In order to evaluate the prospects for both 1957 and 1961, a brief historical review of the world and domestic situation will be helpful.

World War II dramatically changed the position of the U. S. in the world fats and oils economy. From one of the world's major fats and oils importing countries, under the pressure of urgent wartime requirements, the United States became almost completely self-sufficient. Perhaps more remarkable has been the subsequent rapid expansion of American fats and oils production and the increasing relative importance of American exports in world trade. From a net importer of 1.7 billion pounds of fats and oils including the oil equivalent of oilseeds in 1935-39, the United States by 1956 had become a net exporter of 4.3 billion pounds. The total change in the import-export position was 6 billion pounds. The U. S. share of world export trade increased from 2 percent prewar to 33 percent in 1956. The U. S. share of world imports has decreased from 15 percent before the war to 6 percent in 1956. (Table 2)

Foreign production declined sharply during the war and did not regain the prewar level of 41 billion pounds until 1952. Foreign per capita production is still 8 percent less than prewar although foreign per capita consumption now exceeds prewar. The United States meanwhile has more than doubled its prewar production. The U. S. increase enabled world per capita production and per capita consumption to regain prewar levels by the early 1950's and by 1956 to be about 5 percent above prewar.

Table 2.- United States and world exports and imports of fats and oils 1/

Calendar year	Exports			Imports		
	:	:	:	:	:	:
	United	World	United States as	United	World	United States as
	States	:	percent	States	:	percent
	:	:	of world	:	:	of world
	Bil. lb.	Bil. lb.	Pct.	Bil. lb.	Bil. lb.	Pct.
1935-39 average	0.3	13.1	2.2	2.0	13.1	15.3
1945-49 average	1.2	8.1	14.8	1.5	8.1	18.5
1950	1.9	12.3	15.5	1.2	12.3	9.8
1951	2.3	12.8	18.0	1.1	12.8	8.6
1952	2.1	11.7	17.9	.9	11.7	7.7
1953	2.5	12.7	19.3	1.0	12.7	7.9
1954	3.8	14.5	26.2	1.0	14.5	6.9
1955	4.0	14.5	27.6	1.0	14.5	6.9
1956 <u>2/</u>	5.2	15.5	33.5	.9	15.5	5.8

1/ Includes oil equivalent of oilseeds exported and imported.

2/ Partly estimated.

Table 3.- United States and world production of fats and oils and consumption per capita

Calendar year	Production				Consumption per capita		
	United States	Foreign	World	United States as per-cent of world	United States	Foreign	World
	Bil.lb.	Bil.lb.	Bil.lb.	Pct.	Lb.	Lb.	Lb.
1935-39 average	6.9	41.1	48.0	14.3	66.6	18.5	21.2
1945-49 average	9.8	35.0	44.8	21.9	65.6	15.4	18.4
1950	11.7	39.1	50.8	23.0	70.5	16.8	20.1
1951	12.0	39.1	51.1	23.5	64.6	17.1	20.0
1952	12.1	42.5	54.6	22.2	65.0	18.2	21.1
1953	12.8	41.0	53.8	23.8	64.9	17.7	20.5
1954	13.3	43.7	57.0	23.3	64.4	18.7	21.5
1955	14.2	44.6	58.8	24.1	64.9	19.1	21.9
1956	15.2	45.1	60.3	25.2	64.5	19.4	22.2
1957 <u>1/</u>	15.4						

1/ Estimated.

The most notable factor has been the phenomenal expansion of soybean production in the United States. Before World War II, edible fats and oils produced in the U. S., excluding butter, consisted mainly of cottonseed oil and lard. Production of these byproducts of cotton and hogs was not affected materially by their prices. The soybean crop, which is grown for its value as a direct source of oil and protein meal, has changed this picture entirely. World production of fats and oils as a whole as shown in table 3 has increased approximately 25 percent over prewar. Table 4, however, shows that in the same period the world production of soybeans increased about 80 percent, and this increase was almost entirely in the United States. Foreign production of soybeans has not regained the prewar level until this year. United States production in 1956 is more than 800 percent of its prewar average.

Expressed in terms of oil, the increase in the United States production of soybeans from prewar to 1956 represents about 83 percent of the total expansion of edible fats and oils (table 5). It also is over 35 percent of the total world expansion of fats and oils.

Price supports for cottonseed, soybeans, and flaxseed and tung were introduced during World War II to encourage production. Support programs for flaxseed and for both soybeans and cottonseed have been continued except for the three years 1946 to 1948 when cottonseed prices were not supported.

Table 4.- United States and world production of soybeans

Year Harvested	:	United States	Foreign		World	:	United States as percent of world
			China- Manchuria	Others			
			Mil. bu.	Mil. bu.			Pct.
1935-39 average	:	56	359	49	464	:	12
1945-49 average	:	209	307	35	551	:	38
1950	:	299	315	47	661	:	45
1951	:	284	304	48	636	:	45
1952	:	299	325	52	676	:	44
1953	:	269	332	50	651	:	41
1954	:	341	320	56	717	:	48
1955	:	371	335	60	766	:	48
1956 ^{1/}	:	457	325	59	841	:	54

^{1/} Preliminary estimate.Table 5.- Relative increase in soybean and other edible fats and oils production in the U. S. ^{1/}

Year beginning October 1	:	Production			Percent of total production		Percent of increase in total production since 1935-39	
		Soybean:	Other edible	Total	Soybean:	Other:	Soybean:	Other
		oil	fats and oils			edible:		edible
	:	Mil. lb.	Mil. lb.	Mil. lb.	Pct.	Pct.	Pct.	Pct.
1935-39 average	:	304	5,204	5,508	6	94	---	---
1946-49 average	:	1,808	5,846	7,654	24	76	---	---
1950	:	2,724	5,831	8,555	32	68	---	---
1951	:	2,614	6,276	8,890	29	71	---	---
1952	:	2,880	6,153	9,033	32	68	---	---
1953	:	2,786	6,370	9,156	30	70	---	---
1954	:	3,376	6,126	9,502	36	64	---	---
1955	:	3,856	6,607	10,463	37	63	---	---
1956	:	2/4,680	6,120	10,800	43	57	83	17

^{1/} Including oil equivalent of oilseeds exported.^{2/} Oil equivalent of the 457 mil. bu. soybean crop except 30 mil. bu. for seed and feed.

With increased U. S. production of fats and oils and recovery in production in other areas of the world, price supports in 1948 and 1949 and again in 1951 began to result in the acquisition of oilseeds or oil by the Commodity Credit Corporation. Linseed oil inventories reached over $\frac{1}{2}$ billion pounds in 1953-54 before they were sold largely for export at less than domestic market prices. CCC cottonseed oil inventories rose to over one billion pounds in January-February 1954. A large part of this oil was sold for export at less than domestic market prices. Special programs were adopted to encourage domestic consumption and exports. While the oil was accumulated as surplus at the time, it was needed when world supplies were reduced in 1954 and 1955 by short olive crops in the Mediterranean Basin and sunflowerseed crops in Argentina.

CCC price supports from 1951 through 1954-55 resulted in acquisition of large quantities of cottonseed oil. At the same time soybeans moved into market channels and soybean oil gained a larger share of the domestic market. Table 6 shows the movement of soybeans and soybean oil into the world market. While the strongest and largest growth has been in beans as such, the increase in the movement of oil also has been significant.

Table 6.- United States and world exports of soybeans and of soybean oil converted to soybean equivalent

Calendar year	United States			Foreign			World		
	Oil	Beans	Total	Oil	Beans	Total	Oil	Beans	Total
	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.
1935-39 average	1/	2	2	29	82	111	29	84	113
1946-49 average	16	9	25	2	4	6	18	13	31
1950	31	19	50	2	11	13	33	30	63
1951	50	25	75	7	21	28	57	46	103
1952	21	24	45	4	4	8	25	28	53
1953	4	42	46	10	9	19	14	51	65
1954	7	44	51	7	9	16	14	53	67
1955	12	68	80	7	35	42	19	103	122
1956 2/	60	75	135	5	25	30	65	100	165

1/ Less than 500,000 bushels.

2/ Partly estimated.

A sizeable proportion of the U. S. exports of fats and oils in the postwar period has moved out in connection with governmental programs. In the immediate postwar period there was a critical fats and oils shortage in Europe, Japan and other areas faced with heavy rehabilitation problems and possessing little capacity to purchase needed requirements on a commercial basis. Various governmental and private charity programs served to fill this need. Some programs of this type continued to 1956. However, as foreign distress needs were alleviated by increased production abroad and as surpluses accumulated in the hands of CCC in connection with U. S. price supports, other programs were developed that assisted in the movement of surplus fats and oils abroad. The most important current program assisting the movement of surpluses is under Title I of Public Law 480. Table 7 summarizes the volume of fats and oils moving abroad under these programs during the postwar period.

Table 7.- Exports of fats and oils under Government programs
and from CCC inventories, fiscal years 1946-56 1/

Fiscal year ending June 30	Government programs		CCC inventory sales	Total
	Donation	Partial payment		
	<u>Mil. lb.</u>	<u>Mil. lb.</u>	<u>Mil. lb.</u>	<u>Mil. lb.</u>
1946	533	0	0	533
1947	100	1	0	101
1948	146	92	6	244
1949	36	377	9	422
1950	51	62	50	163
1951	23	11	205	239
1952	13	25	85	123
1953	0	6	23	29
1954	32	109	597	738
1955	185	68	836	1,089
1956 <u>2/</u>	240	900	210	1,350
Total	1,359	1,651	2,021	5,031

1/ Oil or oil equivalent.

2/ Preliminary.

Protein meal has represented from 25 to over 50 percent of the product value of oilseeds. Consequently, in appraising the situation for fats and oils and oilseeds it is necessary to consider protein meal as well as oil. In the prewar period the U. S. accounted for about 5 percent of the world trade in meal, including the meal equivalent of oilseeds. U. S. imports approximated exports although imports were largely in the form of oilseeds such as copra and flaxseed while exports were largely protein meal.

The pressures of World War II changed the United States from a balanced position to a net exporter of protein meal (including the meal equivalent of seed). However, the most important development during the war was the expansion in domestic consumption which approximately doubled, both in total quantity and per animal unit. Table 8 shows that domestic consumption of protein meal increased up until the 1951-52 marketing year. However, from 1952-53 to 1954-55 domestic consumption declined both in total and on a per animal unit basis. In 1955-56 both the total quantity and the consumption per animal unit jumped back to the 1951-52 level. Exports of protein meal from 1951-52 to date have increased each successive year and at a rapid rate.

Table 8.- United States production, consumption and net foreign trade in protein meal

Crop year beginning October 1	Production	Consumption	Net imports or exports 1/		
			As seed, in meal equivalent	As meal	Total
	1,000	1,000	1,000	1,000	1,000
	<u>tons</u>	<u>tons</u>	<u>tons</u>	<u>tons</u>	<u>tons</u>
1935-39 average	3,271	3,544	-288	173	-115
1946-49 average	7,000	6,815	130	138	268
1950	8,502	8,660	585	55	640
1951	8,817	9,130	326	-272	54
1952	8,724	8,909	641	-201	440
1953	8,692	8,662	970	2	972
1954	8,784	8,531	1,385	411	1,796
1955	9,769	9,193	1,617	600	2,217
1956	2/11,300	3/9,500	1,900	4/1,800	3,700

1/ Imports are shown by minus.

2/ Includes meal equivalent of soybean crop except for seed of 30 million bushels and export of 75.

3/ Assumes approximately same increase as last year.

4/ Residual.

While the U. S. import-export position on a net basis along with the domestic production and consumption throw light on the market situation for U. S. protein meal (table 8), the share of the U. S. in the world's gross exports and gross imports of protein meal emphasizes the growing relative importance of the U. S. as a supplying country (table 9).

As a result of the expansion in export of protein meal, both as seed and as meal, the U. S. the past year furnished roughly 40 percent of the world export trade. However, Western Europe, the world's great market, is importing only about 80 percent of its prewar volume of 6.1 million tons annually. Since prewar, Europe has increased its feeding efficiency, its output of feed crops, and its quality of hay and pastures.

Just as with fats and oils, the basic factor in the marked increase in both domestic consumption and in exports of soybean meal has been the increased production of soybeans. Table 10 shows how U. S. soybean meal production (including the meal equivalent of soybeans exported) increased from approximately one million tons prewar to 8 million tons in 1955-56. The production of all other protein meals taken together have increased meanwhile from only 2.7 to 3.5 million tons during the same period.

Table 9.- United States and world trade in protein meal 1/

Calendar year	Exports			Imports		
	United States	World	United States as percent of world	United States	World	United States as percent of world
	Million tons	Million tons	Percent	Million tons	Million tons	Percent
1935-39 average	.4	9.5	4.2	.5	9.5	5.3
1946-49 average	.8	3.5	22.9	.3	3.5	.9
1950	.6	5.0	12.0	.3	5.0	6.0
1951	.9	5.7	15.8	.4	5.7	7.0
1952	.6	4.8	12.5	.6	4.8	12.5
1953	1.1	5.8	19.0	.3	5.8	5.2
1954	1.5	6.4	23.4	.3	6.4	4.7
1955	2.3	2/7.0	32.9	.2	2/7.0	2.9
1956	3/3.1	2/8.0	38.7	3/.2	2/8.0	2.5

1/ Includes meal equivalent of oilseeds.

2/ Estimated.

3/ Partly estimated.

Table 10.- United States protein meal production, including the meal equivalent of oilseeds exported

Year beginning October 1	Soybean meal		Other meal		Total
	Quantity	Percentage of total	Quantity	Percentage of total	
	<u>1,000 tons</u>	<u>Percent</u>	<u>1,000 tons</u>	<u>Percent</u>	
1935-39 average	945	26	2,710	74	3,655
1946-49 average	4,461	59	3,047	41	7,508
1950	6,548	70	2,837	30	9,385
1951	6,102	65	3,285	35	9,387
1952	6,308	66	3,289	34	9,597
1953	5,991	61	3,903	39	9,894
1954	7,085	68	3,320	32	10,405
1955	8,082	70	3,534	30	11,616
1956	<u>1/9,800</u>	74	3,400	26	13,200

1/ Assumes the estimated 457 million bushel soybean crop all crushed or exported except for 30 million bushels for seed and feed.

SOYBEANS
Prospects for 1956-57

1956 Soybean Output
New High

Production of soybeans in 1956 is estimated at a record 457 million bushels. This is almost one-fourth above last year, the previous record, and 80 percent above the 1945-54 average. The increase is the result of record acreage for harvest as beans -- nearly 21 million acres -- and a near record yield. The indicated yield of 21.8 bushels per acre compares with 19.9 bushels last year. Growing conditions were generally favorable over much of the main soybean area and in the Eastern coastal States. Harvesting moved along rapidly and beans were mostly of good quality and low moisture content.

Supplies of soybeans for the 1956-57 marketing year are estimated at 461 million bushels, about 80 million bushels more than last year's record. Crushings and exports, which last year totaled 350 million bushels, may reach a new high of 410 million bushels. Assuming 30 million bushels of soybeans are used on farms, this would leave a carryover of about 20 million bushels.

Foreign markets have become an increasingly important market outlet for U. S. soybeans and its products. With a continuing high level of economic activity in most parts of the world, growing population and improved standard of living in many foreign countries, and the impetus provided by sales for dollars and the P.L. 480 programs on edible oils, exports of soybeans and soybean products are expected to remain at relatively high levels during 1956-57. If the Suez Canal continues to be blocked for an extended period of time, the demand for U. S. soybeans and its products is likely to be even larger. A prolonged crisis would probably continue to push up ocean shipping costs and to increase costs from Far East to Europe more than costs from other areas of the world to Europe. There would be a worldwide relative scarcity of ocean shipping, but the Far East would be more affected than other areas, at least for several months.

In the past two seasons, almost 18 percent of the total U. S. supply was shipped abroad compared with 14 percent of the 1953 crop, 11 percent in 1952, and only 6 percent in 1951. The United States is now the major world exporter of soybeans. Manchuria was the major source of world export supply before World War II, exporting an average 69 million bushels in 1935-39. Manchurian shipments have been reduced considerably since then. Northbound shipments of soybeans through the Suez Canal from China-Manchuria were around 12 million bushels in calendar years 1953 and 1954, 19 million bushels in 1955 and may total 20 in 1956. Soybeans imported into Japan and other nations of the Orient are used principally for direct food use. Japan prefers beans to oil in order to utilize the available crushing capacity and provide employment, as is the case in Western Europe also.

Table 11.- Soybeans: Price to farmers, acreage and yield, supply and distribution, United States, 1947-56

Year begin- ning Oct.	Price per bushel	Acreage har- vested for beans	Yield per har- vested acre	Supply			Distribution			Resid- ual 2/
				Season : average: received:	Stocks : Oct. 1	Total : sup- ply	Exports : 1/ oil and meal	Crush- ings : for	Seed	
	Dol.	1,000 acres	Bu.	Production	MIL. bu.	MIL. bu.	MIL. bu.	MIL. bu.	MIL. bu.	MIL. bu.
1947	3.33	11,411	16.3	186.5	5.4	191.9	3.0	161.4	16.1	8.8
1948	2.27	10,682	21.3	227.2	2.6	229.8	23.0	183.7	15.9	4.0
1949	2.16	10,482	22.3	234.2	3.2	237.4	13.1	195.3	19.0	7.0
1950	2.47	13,807	21.7	299.2	2.9	302.1	27.8	252.0	18.2	.0
1951	2.73	13,615	20.8	283.8	4.2	288.0	17.0	244.4	19.5	3.4
1952	2.56	14,435	20.7	298.8	3.6	302.4	31.9	234.4	20.5	5.4
1953	2.73	14,829	18.2	269.2	10.1	279.3	39.7	213.2	23.4	1.8
1954	2.46	17,047	20.0	341.1	1.3	342.4	60.6	249.0	24.2	-1.4
1955 3/	2.20	18,668	19.9	371.1	9.9	381.0	66.8	283.1	26.9	.5
1956 4/	2.15	20,953	21.8	5/457.4	3.7	461.1	410			31
1957					20					

1/ In addition, exports of soybean oil, in millions of pounds and the soybean equivalent in millions of bushels were as follows: 1947, 113 (11.9); 1948, 300 (30.6); 1949, 291 (29.4); 1950, 490 (50.5); 1951, 271 (27.1); 1952, 93 (8.6); 1953, 71 (6.5); 1954, 50 (4.6); 1955, 561 (50.5).

2/ Computed from unrounded numbers. Includes use for feed, direct use for food, and loss.

3/ Preliminary.

4/ Distribution and ending stocks are forecast.

5/ Indicated November 1.

Table 12.- Soybeans: Acreage, yield and production by States, crop years 1953-55

State	Acreage harvested			Yield per acre harvested			Production		
	1953	1954	1955	1953	1954	1955	1953	1954	1955
	1,000 acres	1,000 acres	1,000 acres	Bu.	Bu.	Bu.	Mil. bu.	Mil. bu.	Mil. bu.
Illinois	3,846	4,143	4,370	20.5	21.5	22.5	78.8	89.1	98.3
Minnesota	1,351	1,959	2,253	20.5	21.5	19.5	27.7	42.1	43.9
Indiana	1,808	1,939	2,039	21.0	24.0	21.5	38.0	46.5	43.8
Iowa	1,657	2,129	2,235	21.5	26.5	19.5	35.6	56.4	43.6
Missouri	1,923	1,827	1,940	13.5	14.5	17.5	26.0	26.5	34.0
Ohio	1,007	1,122	1,193	20.5	25.0	24.5	20.6	28.0	29.2
Arkansas	771	958	1,217	11.0	11.5	18.0	8.5	11.0	21.9
Mississippi	250	519	626	12.0	10.0	19.0	3.0	5.2	11.9
Other States	2,216	2,451	2,795	14.0	14.8	15.9	31.0	36.2	44.4
United States	14,829	17,047	18,668	18.2	20.0	19.9	269.2	341.1	371.1

Table 13.- Soybeans: Price received by farmers and value of production and sales, by States, crop years 1953-55

State	Season average price : received by farmers : per bushel			Value of production			Value of sales		
	1953	1954	1955	1953	1954	1955	1953	1954	1955
	Dol.	Dol.	Dol.	Mil. dol.	Mil. dol.	Mil. dol.	Mil. dol.	Mil. dol.	Mil. dol.
Illinois	2.79	2.52	2.25	220.0	224.5	226.1	210.9	215.4	217.4
Minnesota	2.75	2.34	2.20	76.2	99.0	99.4	72.1	94.1	94.5
Indiana	2.67	2.47	2.25	101.4	113.9	98.1	96.8	109.3	93.7
Iowa	2.91	2.41	2.25	103.7	135.3	91.7	98.3	130.6	86.7
Missouri	2.53	2.51	2.15	68.4	69.1	75.6	65.9	66.4	72.6
Ohio	2.80	2.47	2.25	59.5	73.4	69.1	55.3	69.7	65.2
Arkansas	2.48	2.47	2.00	18.1	25.6	42.0	17.0	24.4	40.3
Mississippi	2.60	2.46	2.05	7.8	12.8	25.6	6.5	11.8	24.6
Other States	1/2.59	1/2.51	1/2.12	76.6	88.1	89.1	69.5	81.5	82.1
United States	2.73	2.46	2.20	731.7	841.7	816.7	692.3	803.2	777.1

1/ Simple average.

Table 14.- Soybeans: Yield, price and value of products per bushel of soybeans crushed, United States, 1947-55

Year beginning October	Oil			Meal			Value of products			
	Yield	Price 1/	Value	Yield 2/	Price 1/	Value	Total	Oil	Meal	Percentage distribution
	Pounds	Cents	Dollars	Pounds	Cents	Dollars	Dollars	Percent	Percent	Percent
1947	9.5	23.7	2.25	47.5	4.04	1.92	4.17	54		46
1948	9.8	13.1	1.28	47.2	3.30	1.56	2.84	45		55
1949	9.9	12.3	1.22	48.0	3.22	1.55	2.77	44		56
1950	9.7	17.8	1.73	47.6	3.22	1.53	3.26	53		47
1951	10.0	11.3	1.13	47.8	4.17	1.99	3.12	36		64
1952	10.8	12.1	1.31	48.5	3.38	1.64	2.95	44		56
1953	11.0	13.5	1.48	48.4	3.93	1.90	3.38	44		56
1954	10.9	11.9	1.30	46.8	3.04	1.42	2.72	48		52
1955 3/	11.1	12.5	1.39	47.0	2.63	1.24	2.63	53		47
1956										

1/ Simple average price per pound using the following quotations: Soybean oil, crude, tank cars, f.o.b. midwest mills; soybean meal, bulk, Decatur, quoted as 41 percent prior to July 1950, 44 percent beginning July 1950.

2/ Excludes beans crushed for flour; if these beans were included, the yield would be about 1 pound less or as shown in table 15.

3/ Preliminary.

Table 15.- Soybeans: Crushings and yields of oil and meal per bushel crushed, and price, by months crop years 1950-55

Crushings													
Year begin- ning October	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Year
	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.
1950	19.6	22.8	24.7	25.1	22.5	24.8	22.0	21.3	17.9	17.8	18.8	14.8	252.0
1951	21.6	23.1	23.2	24.0	22.5	21.5	20.1	19.7	18.6	17.5	17.5	15.0	244.4
1952	22.5	22.0	21.4	21.6	18.7	20.4	19.2	20.7	17.3	16.3	18.7	15.7	234.4
1953	21.3	20.3	20.8	20.8	18.9	19.3	17.6	17.5	15.4	15.4	14.8	11.1	213.2
1954	21.7	22.2	21.2	21.5	19.8	19.5	20.0	21.0	22.1	21.3	19.9	18.7	249.0
1955	25.4	25.4	23.9	24.4	24.5	25.4	25.3	24.6	22.2	20.4	21.8	19.9	283.1
1956													
Yield of oil per bu. crushed													
	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.
1950	9.7	9.5	9.5	9.6	9.6	9.7	9.7	9.8	9.9	9.9	10.0	10.1	9.7
1951	10.0	9.8	9.6	9.7	9.9	10.1	10.1	10.1	10.2	10.2	10.2	10.4	10.0
1952	10.6	10.5	10.6	10.7	10.7	10.9	10.8	10.9	11.0	11.0	11.2	11.1	10.8
1953	10.8	10.8	10.9	11.0	11.1	11.1	11.0	11.0	11.1	11.3	11.2	11.2	11.0
1954	10.9	10.8	10.8	10.8	10.8	10.8	10.9	10.9	11.0	11.0	11.0	11.0	10.9
1955	11.0	10.9	11.0	11.0	11.1	11.1	11.1	11.1	11.2	11.2	11.4	11.1	11.1
1956													
Yield of meal per bu. crushed													
	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.
1950	46.3	47.0	46.7	47.0	47.1	46.9	46.7	46.9	46.7	46.4	46.9	46.8	46.8
1951	46.4	46.5	46.7	46.9	46.8	45.9	46.4	46.5	46.7	46.8	47.7	46.9	46.7
1952	47.9	47.1	47.4	47.0	47.4	47.5	47.5	47.3	46.8	47.4	47.6	47.3	47.4
1953	47.5	47.5	47.6	47.4	46.5	47.4	47.7	47.5	47.2	47.9	47.9	46.3	47.4
1954	46.0	45.7	45.8	45.7	45.6	45.5	45.6	45.7	46.1	46.2	46.1	45.9	45.8
1955	45.7	46.0	45.4	43.6	45.9	46.1	46.2	46.4	46.5	46.6	47.1	46.2	46.0
1956													
Average price per bu. received by farmers, United States, 1/ 2/													
	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.
1950	2.03	2.54	2.70	2.90	3.08	3.10	3.12	3.13	2.98	2.86	2.71	2.59	2.47
1951	2.62	2.77	2.83	2.78	2.78	2.76	2.72	2.77	3.02	3.00	3.05	2.83	2.73
1952	2.71	2.71	2.75	2.69	2.63	2.81	2.81	2.78	2.66	2.44	2.40	2.33	2.72
1953	2.41	2.60	2.81	2.83	2.97	3.22	3.52	3.55	3.49	3.47	3.23	2.51	2.73
1954	2.54	2.57	2.57	2.58	2.61	2.54	2.42	2.36	2.32	2.23	2.20	2.00	2.46
1955	2.08	2.06	2.11	2.19	2.25	2.38	2.63	2.98	2.87	2.47	2.33	2.07	2.20
1956	2.07												

1/ Compiled from Agricultural Prices.

2/ Includes an allowance for unredeemed loans and purchase agreement deliveries by States.

Table 16.- Soybean oil: Supply and disposition and oil equivalent of exports of soybeans, 1947 to date 1/

Year beginning October	Supply				Disposition		Soybean oil equivalent of exports
	Pro- duction	Imports	Stocks October 1	Total	Exports	Domestic disap- pearance	
	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.
1947	1,534	2/	204	1,738	112	1,530	27
1948	1,807	2/	96	1,903	300	1,490	225
1949	1,937	2/	113	2,050	291	1,646	128
1950	2,454	---	113	2,567	490	1,906	272
1951	2,444	2/	171	2,615	271	2,150	167
1952	2,536	2/	194	2,730	93	2,462	320
1953	2,350	---	174	2,525	71	2,326	416
1954 3/	2,711	---	127	2,838	50	2,609	664
1955 3/	3,143	---	180	3,322	561	2,534	728
1956			227				

1/ Totals computed from unrounded data.

2/ Less than 500,000 pounds.

3/ Preliminary

Table 17.- Soybean oil: Utilization, year beginning October, 1950-1955 and calendar year, 1947-55 1/

Year beginning October	Food uses				Nonfood uses			Total domestic disap- pearance
	Shorten- ing	Margar- ins	Other	Total	Drying oil products	Foats and loss	Other	
	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.
1950	797	461	302	1,560	205	87	54	1,906
1951	800	579	370	1,748	238	97	67	2,150
1952	879	735	464	2,078	252	106	26	2,462
1953	904	661	453	2,018	215	84	9	2,326
1954 2/	979	741	508	2,228	259	107	15	2,609
1955 2/	803	725	589	2,116	290	107	22	2,534
Calendar year								
1947	705	228	248	1,181	159	69	42	1,451
1948	708	225	240	1,203	162	73	35	1,473
1949	713	257	239	1,210	220	80	22	1,531
1950	841	312	293	1,446	213	82	27	1,769
1951	731	473	331	1,536	194	84	28	1,842
1952	851	652	408	1,911	209	104	75	2,299
1953	903	726	498	2,128	242	101	25	2,496
1954	918	665	419	2,002	209	86	36	2,334
1955 2/	930	746	584	2,260	274	108	8	2,650

1/ Totals computed from unrounded numbers.

2/ Preliminary.

Table 18.- Soybean oil: Supply, disposition and price, by months, crop years 1950-55 1/

Production													
Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Year
begin- ning October	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Year
	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.
1950	191	216	236	241	216	241	212	210	177	177	188	149	2,454
1951	215	225	222	234	222	218	204	199	190	179	179	156	2,444
1952	238	231	227	231	200	222	208	226	190	180	209	174	2,536
1953	230	219	226	228	209	213	195	193	172	173	166	125	2,350
1954 2/	236	240	228	231	214	211	218	229	244	236	219	206	2,711
1955 2/	280	277	262	270	271	281	281	273	249	228	249	221	3,143
1956													
Stocks, first of month													
1950	113	117	132	154	179	202	227	256	244	221	212	193	
1951	171	196	238	281	328	344	354	354	324	296	297	261	
1952	194	200	213	237	253	245	257	261	292	273	270	243	
1953	174	150	163	208	242	233	239	241	231	211	211	196	
1954 2/	127	146	157	176	199	201	176	171	159	150	187	192	
1955 2/	180	187	217	218	219	209	213	281	296	296	288	255	
1956	227												
Exports													
1950	21	18	48	23	17	33	46	47	79	60	52	48	490
1951	30	34	37	18	28	25	15	24	10	14	25	11	271
1952	13	23	17	3	1	5	2	4	4	7	8	7	93
1953	2	4	3	3	19	31	2	3	1	1	2	1	71
1954 2/	5	4	4	3	2	4	3	4	3	6	10	2	50
1955 2/	12	31	55	47	45	43	32	48	41	58	75	76	561
1956													
Domestic disappearance													
1950	166	183	166	193	176	183	138	174	122	126	155	123	1,906
1951	159	150	142	170	179	182	189	205	208	165	190	211	2,150
1952	220	195	185	212	208	205	202	192	205	176	227	236	2,463
1953	252	203	178	191	199	176	192	200	190	173	179	193	2,326
1954 2/	212	224	204	205	209	232	220	237	250	193	204	217	2,609
1955 2/	261	216	206	222	236	236	180	210	207	179	208	174	2,534
1956													
Price per pound, crude, tank cars, f.o.b. midwest mills													
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
1950	14.6	17.1	19.6	20.6	21.1	20.5	20.5	19.5	16.4	14.5	15.4	14.0	17.8
1951	13.8	13.2	12.6	11.2	10.7	10.2	9.1	10.1	11.2	11.3	11.5	11.2	11.3
1952	10.9	11.8	12.9	12.7	12.6	13.5	13.7	12.3	11.5	10.3	10.8	11.7	12.1
1953	13.3	13.6	12.6	12.1	12.5	13.3	14.1	13.9	14.2	14.1	14.8	13.5	13.5
1954	12.1	12.2	12.5	12.2	12.2	11.8	11.6	12.2	12.6	11.6	11.3	10.6	11.9
1955	10.9	11.0	10.9	11.7	12.8	14.3	14.9	15.3	13.6	12.5	11.4	11.3	12.6
1956	12.5												

1/ Totals computed from unrounded data. 2/ Preliminary.

Prices to farmers for 1956 crop soybeans are being supported at a national average farm price of \$2.15 per bushel, 11 cents more than a year ago. The support is equal to 75 percent of the January 15, 1956 parity price compared with 70 percent of parity for the 1955 crop. Loans and purchase agreements are available through January 1957. Farmers have through May 31, 1957 to redeem loans. The Secretary of Agriculture announced on October 1 that 1956-crop soybeans taken into CCC inventory at the loan maturity date will not be sold at less than the higher of the domestic market price or the current price support level plus reasonable carrying charges. This sales policy will remain in effect until October 1, 1957, when a reappraisal will be made of the soybean situation, and further announcement will be made as to whether this policy will be continued, modified, or terminated.

Farm prices of new crop soybeans averaged \$2.07 per bushel in October when the 1956 marketing season opened. By mid-November market prices had risen about 20 cents. Because of larger supplies, only a moderate seasonal rise in soybean prices is likely in late winter or spring unless foreign demand becomes exceptionally strong. As another possible result of the large crop, the spread between the value of products obtained from a bushel of soybeans and the average farm price may be larger than in recent years. The size of competing foreign crops, for which better estimates will be available in early 1957, will have considerable influence on U. S. soybean prices later in the crop year.

There is usually a seasonal variation in prices received by farmers for soybeans. In the 10 crop years 1946-55, January farm prices averaged 13 percent above prices for the preceding October. Last season the October-January rise was only 5 percent but subsequently prices continued to advance under the stimulus of strong export and crushing demand to a peak of \$2.98 in May 1956. Prices then declined each month to \$2.07 in September. This year, only a moderate uptrend is likely, barring new increases in foreign demand.

Soybean Farm Stocks To Rise

Soybean stocks on farms January 1, 1957 are expected to reach a new high. Farmers are storing a record quantity of beans rather than market them at harvest. By doing so they can take advantage of any seasonal rise in price and they can utilize the support program under which storage loans or purchase agreements are available, as protection against declines. Farm stocks on January 1 could possibly reach 175-200 million bushels, a substantial portion of which probably would be under CCC loan. The previous record for farm stocks for January 1 occurred in 1955 when farmers held 150 million bushels or about 44 percent of the 1954-55 soybean production.

Crushings of soybeans during 1955-56 totaled 283 million bushels or almost 14 percent more than the previous season. Soybean processing last season got off to a rapid start. Crushing reached 25 million bushels in October and the average monthly crush was maintained at that level through May. The season average oil outturn of 11.1 pounds per bushel equaled the 1953 record and continued to reflect the use of the more efficient solvent extraction process and the high oil content of the beans. The season average yield of soybean meal per bushel crushed was 46 pounds, about the same as the previous year.

Outlook for 1957-58

More Acres Possible in 1957, Depending on Corn Program

The acreage of soybeans is expected to stay very large in 1957, and if corn producers vote in December to accept provisions for a Soil Bank base acreage rather than acreage allotments, the soybean acreage could increase 1.0 to 1.5 million acres. If the yield per acre is assumed to be the same as the 1952-56 average of 20.2 bushels, the crop on such a large acreage would be around 450 million bushels, or about the same as this year.

If the 1957 crop of soybeans should be 450 million bushels and total supplies (including beginning stocks) about 470 million bushels, and assuming farm uses at 30 million bushels, about 440 million bushels would be available for crushing, export, or carryover. This compares with about 430 million in 1956-57.

Price support for soybeans is discretionary with the Secretary of Agriculture. No announcement as to support for the 1957 crop has been made as yet.

Total Food Fats Not Likely to Increase in 1957-58

Output of cottonseed may be down in 1957 because cotton acreage is put in the Soil Bank. With the soybean crop virtually unchanged and little increase or decrease likely in other food fats, this could hold total production of food fats below 1956-57. On the other hand, some soybean stocks accumulated in 1956-57 might be crushed in 1957-58; in this case total food fat production would be close to that of 1956-57.

The 5-Year Outlook

In projecting the soybean situation forward for 5 years it is necessary to make certain assumptions about fats and oils. These assumptions are:

- (1) Production of butter and cottonseed oil will not change materially from the 1956 level.
- (2) Production of lard will be up moderately, reflecting a somewhat larger hog slaughter, but a smaller yield of lard per hog due to a shift to the meat-type hog.
- (3) U. S. production of inedibles considered as a group will increase only slightly with flaxseed, tung and fish oil and inedible tallow remaining about the same and grease increasing moderately.
- (4) Continuation of the upward trend in world economic activity, resulting in an uptrend also in domestic and foreign demand for fats and oils.
- (5) Average growing conditions.
- (6) World peace.

Under this set of assumptions, the estimated production of U. S. food fats and oils in five years would be about 12.5 billion pounds, 1.5 billion more than currently estimated for 1956-57. Domestic disappearance of food fats and oils in 5 years would be about 8.7 billion pounds, 0.7 billion more than for 1956-57. If this situation develops, then foreign markets will become even more important as an outlet for U. S. fats and oils.

In the postwar period, per capita consumption of total fats and oils outside the U. S. has been increasing at the rate of about 2 pounds every 5 years and in 1956 totaled over 19 pounds per person. The U. S. level is about 64 pounds per person. Thus, if a sufficient supply is available, a further increase in non-U. S. consumption seems probable. If this increase should amount to 1.0 pounds, the world would need about 6 billion pounds more of fats and oils by the end of the 5-year period. While the larger part of this should be supplied from increased foreign production, there would appear to be room for the additional one billion pounds estimated to become available from the United States.

Soybeans will play an increasingly important role in the U. S. fats and oils situation during the next 5 years. Increases in soybean acreage in the future, as in the past, will result from gradual reduction in acreage needed for wheat and cotton, as well as corn, due in part to steadily rising yields per acre. Soybeans are expected to furnish about 1 billion of the 1.5 billion pounds increase in domestic production of fats and oils. Soybean oil production in 1956, including the oil equivalent of exports, is estimated to represent about 40 percent of the total food fats produced in the U. S. As production trends upward, it may represent nearly half by 1961.

With the increase of about 1 billion pounds of soybean oil, however, there will be an increase of over 2 million tons of protein meal. There is potential market for this meal if we assume:

- (1) That domestic demand increases both because of an increase in the number of animals and a higher rate of protein meal feeding per animal unit. This might take care of about 1 million tons.
- (2) That European consumption of protein meal continues upward. This might also take care of almost 1 million tons.

However, as far as the export markets are concerned it is possible that there will be competition from increased production in Canada, Argentina, China and other countries.

COTTONSEED Prospects for 1956-57

Cottonseed Prices Above Support; Production Down

Cottonseed production in 1956 is computed at 5,431,000 tons, based on a normal lint-seed ratio. This would be about 10 percent less than last year and the smallest since 1950. The reduced output reflects a drop in the acres of cotton for harvest to 15,661,000, 7.5 percent less than in 1955 and the smallest since 1882. Abandonment of the acres in cultivation July 1 totaled nearly 8 percent, including that from natural causes and removal of acreage to comply with Soil Bank and acreage allotments.

The yield of cotton lint per harvested acre was 403 pounds, second only to the record high of 417 pounds in 1955 and well above the 1945-54 average of 283 pounds. Diversion of less productive acres and shifts in acreage from lower to higher yielding areas are some of the reasons for the high national average yield per acre. Growing and harvesting conditions were quite favorable this year in most areas. Cotton ginned prior to November 1 represented about 75 percent of the 1956 crop compared with 65 percent last year.

Table 19.- Cottonseed: Price to farmers, acreage, yield, supply and distribution, United States, 1947-56

[illegible]

1/ Purchase price, basis grade except 1949 which is average grade.

2/ Includes feed, fertilizer, and loss.

3/ Based on acres in cultivation July 1 less acres removed to meet allotments.

W/ Preliminary.

5/ Not available, included in residual.

6/ Preliminary. Distribution and ending stocks are forecast.

7/ Indicated November 1 if the ratio of lint to cottonseed is the same as the average for the past five years.

Compiled from reports of the Bureau of the Census and U. S. Department of Agriculture.

Prices received by farmers for cottonseed so far this crop year have been around \$50 per ton which is above the support (\$44 per ton, purchase price, basis grade 100) and the 1955 season average price of \$44.60. Cottonseed prices for the 1956-57 season probably will average near their recent level. Prices of crude cottonseed oil, southeast mills, in mid-November were 13.8 cents per pound compared with 11.1 cents a year ago. Oil prices are likely to remain at least as high as their current level through most of the season. Meal prices now are slightly higher and linters are about the same as a year ago. Linter prices may strengthen somewhat during the marketing year as supplies are the smallest since 1952. If disappearance remains at last year's level, linters stocks on August 1, 1957 will be about a half-million running bales, down 50 percent.

Outlook for 1957-58

Cotton Acreage Allotment

About the Same but Soil Bank, Yields to Affect Harvest

The U. S. Department of Agriculture announced a national marketing quota of 11 million bales of cotton for the 1957 crop and a national acreage allotment of 17.4 million acres, the same as the national allotment for 1956. However, under provisions for State allotments, the State totals are 17.6 million acres. A grower's referendum on the 1957 quotas will be held on December 11. At least two-thirds of the farmers voting in the referendum must approve quotas before they may be made effective. If quotas are turned down, support to eligible growers will drop to 50 percent of parity.

Cotton acreage removed from production and placed under the Soil Bank program next year would tend to reduce cottonseed production. On the other hand, yields of lint per acre have recently exceeded those from which the acreage allotment is calculated. If these two influences should cancel out, so that cotton production is the same as the marketing quota, and if the relationship between lint and cottonseed yields is the same as the average for the past 5 years, output of cottonseed would total about 4,500,000 tons. This would be nearly 18 percent below the 1956 level and the smallest since 1950. Cottonseed oil and meal production would drop about 300 million pounds and 400,000 tons, respectively, creating a strengthening effect on prices.

PEANUTS

Prospects for 1956-57

Peanut Output Down Slightly;
Farm Prices Around Support

The 1956 peanut crop will provide more peanuts than required for food and farm uses. Season average prices to farmers for Southeast Spanish and Runners are near the CCC loan value but the relatively small Southwest Spanish crop probably will average somewhat higher. Virginia-Carolina peanuts have just started to move in volume and prices are near support. The loan value is the support price less about half a cent for charges for storage, inspection, grading and expenses of cooperatively marketing the peanuts. Loans on 1956 crop peanuts are available until January 31, 1957 and will mature May 31, 1957 or earlier on demand by CCC.

Production of peanuts in 1956 is estimated at 1,489 million pounds, 5 percent less than last year. However, carryin stocks were up, so the total supply is nearly the same as last year. The acreage to be picked and threshed is estimated at 1,509,000, about 11 percent below 1955. Compared with last year, indicated production is up 31 percent in the Virginia-Carolina area and about 4 percent in the Southeast but is down about 62 percent in the drought-plagued Southwest.

Civilians in recent years have been consuming about 6.5 pounds of peanuts, farmers' stock basis, per person. In 1954-55, per capita consumption fell about half a pound because of reduced supplies and higher prices. This past year, the shortage and relatively high prices for the Virginia type peanut held consumption to about 6.0 pounds per person. With large supplies available and prices lower, consumption in 1956-57 is likely to return to about 6.5 pounds per person. If farm uses are about the same as in recent years, about 250 million pounds or 17 percent of the crop would be available for crushing, exports and addition to stocks. As most of the excess peanuts will be acquired by CCC under the support program, the quantity crushed and exported will to a large extent depend on Government policy. As of the end of October, farmers had placed 238 million pounds of 1956 crop peanuts under loan.

Outlook For 1957-58

Little Change in Price
of 1957 Crop Peanuts

Prospects are that prices received by farmers for 1957 crop peanuts will be about the same as those for the 1956 crop. Although the 1957-58 price support program has not been announced as yet, production probably will be large enough to keep prices around support. Present legislation provides that the parity level for 1957 crop peanuts will be equal to 95 percent of the old parity, the same as in 1956.

Table 20.- Peanuts: Supply and disposition (farmers' stock basis), United States, 1937-56

Year begin- ning Sept. 1	Pro- duc- tion	Stocks Sept. 1	Total supply 1/	Exports and ship- ments	Crushed for oil	Seed, feed, farm loss and shrink- age	Domestic food use		
							Mili- tary	Civil- ian	Civil- ian per capita
	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Lb.
Average :									
1937-41 :	1,395	122	1,522	3	320	197	15	891	6.7
1942 :	2,193	115	2,312	4	448	328	146	1,170	8.9
1943 :	2,176	216	2,393	36	378	418	223	1,092	8.4
1944 :	2,081	246	2,412	29	431	314	288	1,140	8.7
1945 :	2,042	210	2,252	63	378	273	14	1,243	9.1
1946 :	2,038	281	2,319	252	534	296	---	1,036	7.2
1947 :	2,182	201	2,383	483	478	293	3	951	6.5
1948 :	2,336	175	2,511	762	483	227	6	914	6.2
1949 :	1,865	119	1,984	131	612	224	7	892	5.9
1950 :	2,035	118	2,153	72	642	224	14	948	6.2
1951 :	1,659	253	1,912	4	415	159	10	992	6.4
1952 :	1,356	332	1,688	3	198	127	10	1,009	6.4
1953 :	1,574	341	1,915	226	305	124	10	1,034	6.5
1954 :	1,008	216	1,405	8	93	109	7	989	6.1
1955 2/ :	1,565	199	1,769	9	262	144	1	991	6.0
1956 3/ :	1,489	362	1,851			150	(1,100)		

1/ Includes imports which are negligible in every year except in 1944, 1954 and 1955 when 85 million, 181 and 5 million pounds, respectively, were imported. 2/ Preliminary. 3/ Forecast.

A marketing quota of 725,305 tons (1,450 million pounds) of 1957 crop peanuts and a national allotment of 1,610,000 acres for picking and threshing was announced on November 9, 1956. This is the minimum marketing quota and acreage allotment permitted under existing legislation. Last year the quota was 750,000 tons (1,500 million pounds) and the allotment was 1,650,000 acres. Under the formula required by law, the yield used in making 1957 determinations is higher than that for 1956.

Peanut producers will vote on December 11, 1956 in a referendum on marketing quotas for the 1957, 1958, and 1959 crops. Quotas have been in effect since 1949. A two-thirds favorable vote in a referendum is required in order to continue quotas. Existing legislation provides that if quotas are in effect, the price of peanuts will be supported at some level between 75-90 percent of parity. If quotas are rejected, support will be at 50 percent of parity to cooperators.

FLAXSEED

Prospects for 1956-57

Flaxseed Crop In Excess of Use;
Farm Prices Near Support

Supplies of flaxseed (including the flaxseed equivalent of linseed oil) in 1956-57 are estimated at about 63 million bushels. Output of flaxseed is the second largest of record but stocks at the beginning of the marketing year were the smallest since 1947.

Stocks have been cut sharply during the past three crop years by heavy exports of linseed oil and flaxseed. In the 1953 and 1954 marketing years, nearly all of the U. S. exports were from Government stocks and were sold at less than domestic market prices. U. S. flaxseed prices in both years were around the support levels. Exports during the 1955-56 marketing year totaled about 17 million bushels (flaxseed equivalent); they were about equally divided between sales from CCC supplies and from commercial sources. World prices rose sharply during the year and last spring U. S. prices were 25 percent above the 1955 support level.

Supplies of flaxseed for 1956-57 may be about 20 million bushels above domestic requirements. Carryin stocks on July 1 were 11 million bushels (including the flaxseed equivalent of linseed oil). Production is estimated at 52 million bushels, compared with about 32 million needed for oil, seed and feed. If commercial stocks are not reduced below the relatively small inventory on hand at the beginning of the year, about 20 million bushels would be available for export or delivery to CCC.

Flaxseed prices to farmers so far this year have averaged near the 1956 support price and will probably continue to do so. Farmers placed about 6 million bushels of flaxseed, 11 percent of the crop, under the support program by mid-October. The deadline for loans and purchase agreements is January 31, 1957.

World Export Supplies of
Flaxseed Increase

Export prospects for U. S. flaxseed in 1956-57 are not as bright as last year because of increased supplies in other countries. The world scarcity of early 1956 has been transformed into abundance with the harvest of the Canadian and Argentine crops this fall.

Canada's flaxseed crop is estimated at 35 million bushels, nearly double the 1955 crop and a new record. Assuming Canada's domestic use at 8 million bushels, the same as last year, about 27 million bushels would be available for export or carryover. Canada exported not quite 12 million bushels during 1955-56.

FOS-181

FOS-181

17/ Domestic disappearance plus linseed oil exports.

2/ Partly estimated.

3/ Preliminary.

Indicated as of November 1

5/ Forecast.

Compiled from reports of the Bureau of the Census and United States Department of Agriculture.

Table 22.- Flaxseed: Yield, price and value of products per bushel of flaxseed crushed United States, 1947-55

Year beginning July	Oil		Meal		Value of products			
	Yield	Price 1/	Value	Yield	Price 1/	Value	Percentage distribution	
							Oil	Meal
	Pounds	Cents	Dollars	Pounds	Cents	Dollars	Percent	Percent
1947	19.8	29.5	5.84	35.1	4.0	1.40	81	19
1948	19.8	26.8	5.31	35.9	3.2	1.15	82	18
1949	19.5	17.7	3.45	37.1	3.2	1.19	74	26
1950	20.0	18.8	3.76	36.5	2.9	1.06	78	22
1951	20.1	16.7	3.36	36.1	3.3	1.19	74	26
1952	20.1	15.0	3.02	36.4	3.6	1.31	70	30
1953	19.8	14.8	2.93	36.0	3.3	1.19	71	29
1954 2/	19.6	13.6	2.67	36.7	3.1	1.14	70	30
1955 2/	19.9	14.0	2.79	36.8	2.8	1.03	73	27
1956								

1/ Simple average price per pound using the following Minneapolis prices: raw oil in tank cars; 34 percent protein meal, bulk.

2/ Preliminary.

Table 23.- Flaxseed and linseed oil: World export availabilities from 1956 crops with comparisons with exports in previous years 1/

Source	Year beginning July 1									
	Calendar year:		1953		1954		1955		Availabilities	
	average								from 1956	
	1934-38								crops 2/	
	Oil	Seed	Oil	Seed	Oil	Seed	Oil	Seed	Oil	Seed
	basis	basis	basis	basis	basis	basis	basis	basis	basis	basis
	Mil.	Mil.	Mil.	Mil.	Mil.	Mil.	Mil.	Mil.	Mil.	Mil.
	lb.	bu.	lb.	bu.	lb.	bu.	lb.	bu.	lb.	bu.
Exports										
Argentina	1,155	57.8	536	26.8	306	15.3	237	11.9	360	18
Canada	---	---	124	6.2	117	5.8	3/210	3/10.5	540	27
Uruguay	55	2.8	87	4.4	86	4.3	4/	4/	4/	4/
India	185	9.2	5	.2	83	4.2	160	8.0	100	5
Other 5/	31	1.5	59	3.0	23	1.2	100	5.0	100	5
Total non-U. S.	1,426	71.3	811	40.6	615	30.8	707	35.4	1,100	55
Less imports by U. S.	346	17.3	6/	6/	6/	6/	6/	6/	6/	6/
Exports to countries other than the										
U. S. from non-U. S. sources	1,080	54.0	811	40.6	615	30.8	707	35.4	1,100	55
U. S. Exports	1	.1	350	17.5	487	24.3	347	17.3	400	20
Export availabilities to countries										
other than the U. S., from all										
sources	1,081	54.1	1,161	58.1	1,102	55.1	1,054	52.7	1,500	75

1/ Seed converted on basis of 20 pounds of oil to the bushel.

2/ Quantities indicated would not necessarily all be exported by July 1, 1957.

3/ One million bushels, 20 million pounds, has been excluded to compensate for a similar quantity imported from the U. S.

4/ Included in other.

5/ Partly estimated in 1953-55.

6/ Negligible.

Argentine plantings of flaxseed for the 1956-57 crop are estimated at about 3 million acres. The crop probably will be around 25 million bushels compared with the 1955-56 crop of 9 million bushels. A crop this large would give an exportable supply approaching 20 million bushels. In recent years, Argentina has prohibited exports of flaxseed so exports have been in the form of linseed oil.

India's 1956 flaxseed crop is estimated at 15 million bushels, about the same as last year. Exports of seed in India are also currently prohibited. Linseed oil exports in 1955 were equivalent to about 8 million bushels of flaxseed, but this was an unusually high year.

Total exportable supplies of flaxseed (including the seed equivalent of linseed oil) from the 1956 crops in foreign countries are likely to total about 55 million bushels. This is about 65 percent more than was available from the 1955 crops and is about equal to the average level of total world exports in recent years. Prices of flaxseed and linseed oil on world markets have declined materially since last summer and are now too low to permit the sale abroad of U. S. supplies at prices that would reflect the U. S. flaxseed support price to farmers. Unless world prices rise sufficiently to induce exports, virtually all of the U. S. crop above domestic requirements is likely to be placed under loan or purchase agreement and to be acquired by CCC after loans mature on April 30, 1957.

Outlook for 1957-58

Production to Continue Above U. S. Needs

United States production of flaxseed in 1957-58 probably will continue well above domestic use, assuming average growing conditions. About 95 percent of the crop is grown in Minnesota and North and South Dakota where alternative land uses are limited. The wheat allotment for the 1957 crop is about the same as the year before. The Soil Bank program for 1957 crop wheat could increase flaxseed acreage by 250,000 acres in 1957 if diverted wheat acreage is planted to flax.

Farmers increased flaxseed acreage in the main growing areas from 1955 to 1956 mainly because flaxseed prices rose sharply above the 1956 support level around planting time. Yields in 1956 were much better than the year before.

Price support for flaxseed is discretionary with the Secretary of Agriculture. The 1956 crop is being supported at 70 percent of parity, \$3.09 per bushel, farm basis. As yet, no announcement has been made regarding support for the 1957 crop.

TUNG OIL, CASTORBEANS

Tung Oil Production Up;
Beginning Stocks Down

Domestic supplies of tung oil (production plus stocks) in the marketing year which began November 1, 1956 are estimated about 35 million pounds while domestic use may be about 50 million. However, domestic needs will be met as imports probably will again be large. Beginning stocks are the smallest since 1952 and it will be late November before domestic tung oil is available from the crushing mills. Prices could strengthen somewhat, temporarily, from the mid-November price of 23.0 cents per pound, raw, imported, New York but much depends upon the timing and volume of imports from Argentina and Paraguay.

The prolonged blockage of the Suez Canal will increase the demand for South American tung oil as shipments normally moving northward to Europe from the Far East will be disrupted, shipping becomes short, and transportation costs increase. The extent to which European countries become dependent on Argentina and Paraguay for tung oil supplies will be reflected in the strengthening of the world price of tung oil.

The 1956 crop was damaged by freeze last spring and production of tung oil, according to unofficial trade reports, may be about 25 million pounds. This would compare with 2 million in 1955, 15 in 1954, and 40 in 1953. CCC stocks of tung oil were disposed of during the past marketing season and for the first season since 1952, the Corporation did not have carryin stocks. Commercial stocks of tung oil were also reduced considerably and on November 1, 1956 are estimated at about 10 million pounds. Consequently, total domestic availabilities in 1956-57 may be about 35 million pounds. Domestic use in the last 5 years has averaged about 50 million pounds. For consumption in 1956-57 to be maintained at this level and assuming no change in stocks, about 25 million pounds would need to be imported. This quantity probably can be obtained from Argentina and Paraguay. Imports in November 1955-September 1956 totaled 25 million pounds, nearly all of it from Argentina. U. S. imports from Red China, the major world exporter, are embargoed.

Argentine output of tung oil for the marketing season which began August 1, 1956 is forecast by foreign trade circles at a record 40 to 44 million pounds. This would be equal to or larger than the previous record of 40 million pounds set in 1953-54, and twice as large as the latest estimate of 22 million for 1955-56. The large crop is ascribed to exceptionally favorable weather conditions.

The 1956 U. S. tung nut crop is being supported at \$53.76 per ton (65 percent of parity), basis 18.5 percent oil content. The equivalent price for tung oil is 21.0 cents per pound. Support last year, \$51.06 per ton or 20.0 cents per pound, was at 60 percent of parity. Price support for tung nuts is mandatory at some level between 60-90 percent of parity and market prices are now near or a little above supports. Farm prices probably will stay at least equal to supports and might be higher.

Table 24.- Tung nuts: Supply, disposition and price, 1939-55

Year beginning November	Supply			Disposition		Price		Oil yield per ton crushed
	Pro- duction	Imports	Total	Crushings	Residual	Season average	Support	
	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons	Dol.	Dol.	Lb.
1939	1.2	---	1.2	(1.2)	---	42.20		
1940	11.0	---	11.0	(11.0)	---	60.00		
1941	8.7	---	8.7	(8.7)	---	88.30		
1942	16.4	---	16.4	16.4	---	91.80		316
1943	6.2	---	6.2	5.5	.7	99.00		341
1944	26.7	---	26.7	27.3	-.6	102.00	100.00	321
1945	37.1	---	37.1	27.5	9.6	98.90	101.25	332
1946	57.4	---	57.4	45.1	12.3	96.90	---	319
1947	53.2	---	53.2	50.6	2.6	64.90	72.00	316
1948	58.5	2.7	61.2	50.3	10.9	49.10	---	339
1949	87.9	.3	88.2	83.1	5.1	63.70	60.00	322
1950	36.5	---	36.5	35.8	.7	111.00	63.00	343
1951	49.1	.1	49.2	48.5	.7	106.00	67.20	303
1952	132.1	.5	132.6	129.5	3.1	79.80	67.20	335
1953	120.0	---	120.0	112.6	7.4	66.80	63.38	352
1954	51.0	---	51.0	46.6	4.4	59.40	54.96	325
1955 1/	6.2	.5	6.7			64.00	51.06	
1956							53.76	

1/ Preliminary.

Compiled from reports of the Bureau of the Census and U. S. Department of Agriculture.

Table 25.- Tung oil: Supply, disposition and price, calendar year average 1935-39 and year beginning November 1942-56 1/

Period	Supply				Disposition		Price			Oil acquired by CCC
	Begin- ning stocks	Pro- duction	Imports	Total	Exports 2/	Domestic disap- pearance	Drums, N.Y.(im- ported)	Tanks, f.o.b. mills 3/	Support	
	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Ct.	Ct.	Ct.	Mil. lb.
Average 1935-39	37.9	.6	123.2	161.7	5.7	118.1	18.2			
1942	31.4	5.2	4/	36.7	1.8	5/11.5	39.0			
1943	28.7	1.9	1.8	32.3	.7	5/10.5	39.0			
1944	22.8	8.8	.3	31.9	2.5	21.7	39.2		36.0	---
1945	7.7	9.1	24.5	41.3	.9	33.2	39.2		6/36.0	---
1946	7.2	14.4	103.4	125.0	6.0	87.1	32.4		---	---
1947	31.9	16.0	140.4	188.4	10.4	130.4	25.2		25.0	7.8
1948	47.6	17.0	72.4	137.0	10.9	107.7	23.4		---	---
1949	18.5	26.8	105.9	151.1	8.2	112.5	26.5	25.1	24.1	1.6
1950	30.5	12.3	48.2	91.0	6.4	5/72.4	38.2	36.7	25.1	---
1951	16.0	14.7	30.4	61.2	1.3	51.2	40.8	39.1	26.5	---
1952	8.7	43.4	13.0	65.1	.3	49.6	31.3	28.6	26.5	5.8
1953	15.1	39.6	41.5	96.3	.3	49.3	24.3	23.8	23.9	32.8
1954 7/	46.7	15.1	25.2	87.1	3.6	51.1	25.1	23.3	21.2	4/
1955 8/	32.4	2.0	27.0	61.4			26.2	24.4	20.0	---
1956 9/	10.0	25.0							21.0	

1/ Data by crop year not available until 1942-43.

2/ Includes reexports.

3/ Not available before April 1949.

4/ Less than 50,000 pounds.

5/ Factory consumption figures used for years in which reported factory consumption exceeds domestic disappearance.

6/ Processor had to agree to buy back oil at 37 cents a pound or else CCC would purchase oil only at 30 cents a pound.

7/ Preliminary. 8/ Partly estimated. 9/ Forecast.

Table 26.- Castor beans: World production, exports, U. S. imports and prices, 1947-55

Year	World			U. S. imports			Price per ton of beans at Brazilian ports
	Production		Exports	Beans	Bean equivalent of oil	Total	
	Total	Excluding U. S.	Beans and oil in terms of beans				
	1,000 short tons	1,000 short tons	1,000 short tons	1,000 short tons	1,000 short tons	1,000 short tons	Dollars
1947	464	464	272	138	7	145	216.10
1948	547	547	256	151	3	154	147.16
1949	504	504	184	145	11	156	108.30
1950	531	531	342	132	51	183	141.43
1951	544	533	267	75	95	170	260.02
1952	545	532	284	70	120	190	196.38
1953	571	546	289	57	136	193	145.60
1954	540	534	249	55	61	115	102.95
1955 $\frac{1}{2}$	532	531	300	44	102	146	114.09
1956 $\frac{1}{2}$	545	542	290				

1/ Preliminary.

Compiled from reports of the Bureau of the Census and the United States Department of Agriculture.

Table 27.- Castor oil: Supply, disposition and price, U. S., 1947-55

Year	Supply					Disposition			Price, No. 1 1/
	Production from		Imports	Stocks Jan. 1	Total	Exports	Computed disap- pearance	Factory consump- tion	
	Domestic	Imported							
	material	material							
	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Ct.
1947		117	7	19	143	4	116	91	29.10
1948		136	2	24	162	2	128	107	22.73
1949		128	11	32	171	3	130	87	18.05
1950		128	47	38	213	2	181	120	20.36
1951	5	74	89	30	198	1	174	108	33.57
1952	8	66	112	23	209	1	182	81	28.91
1953	10	56	127	26	219	1	169	85	22.65
1954	7	55	57	50	169	1	138	79	17.18
1955 2/	1	49	95	30	175	1	136	100	15.94
1956 2/	2			39					

1/ Tanks, f.o.b. New Jersey mills. 2/ Preliminary.

Compiled from reports of the Bureau of the Census and the United States Department of Agriculture.

Experimental Castor-
beans in 1956

About the only castorbeans produced in 1956 were a few to be used almost entirely for seed and experimental purposes. The discontinuance of the Government's program of guaranteed minimum price to domestic growers, in effect during 1951-54, has virtually eliminated commercial production.

CCC had small plantings under the 1956 Castorbean Seed Program which provided for the acquisition of breeder and foundation castorbean seed for the National Stockpile. The purpose of the program was to increase the availability of an improved variety of foundation seed stocks of high viability for rotation with castorbean seed now in the stockpile.

SUPPLIES AND PRICES, TOTAL FATS AND OILS

Total supplies of food fats in the marketing year which began on October 1, 1956 will be about 11.8 billion pounds, about the same as last year's record. Beginning stocks were smaller but increased output of soybean oil will more than offset smaller output of cottonseed oil and lard (table 28).

Butter production in 1956-57 probably will be about as large as a year earlier but total supplies will be down about 170 million pounds, reflecting a smaller carryin due primarily to reduction of government stocks.

Lard output in 1956-57 is expected to be down about 240 million pounds because of an estimated 8 percent drop in hog slaughter. Also, yields per 100 pounds live weight probably will drop slightly because of a tendency by the packers to trim less fat from pork cuts whenever pork supplies are reduced. Reduced output will much more than offset the 48 million pounds larger stocks on October 1, 1956.

Edible vegetable oil supplies will be slightly larger than last year, with increased output more than offsetting a smaller carryin. More soybean oil will be produced as the volume of soybeans to be processed in 1956-57 reaches a new high. Cottonseed oil output will be down about 10 percent because of the drop in cotton production. There will be a substantial surplus of peanuts available for crushing as supplies in 1956-57 are 5 percent above last year and are well in excess of probable domestic edible use.

Inedible tallow and grease supplies will be down about 200 million pounds in 1956-57 because of lower production. Beginning stocks are up about 46 million pounds. Cattle slaughter will be about the same as last year but hog slaughter will be down.

Linseed oil supplies will be about as large as last year. The quantity of flaxseed available for crushing is substantially more than adequate to meet domestic requirements.

Table 28.- Food fats and oils: Supply and disposition, 1951 to date 1/

Item	Year beginning October					
	1951	1952	1953	1954	1955 2/	1956 3/
	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.
<u>Stocks, October 1</u>						
Butter	114	111	323	489	295	91
Lard	57	143	42	50	75	123
Cottonseed oil	193	393	1,016	896	361	254
Soybean oil	171	194	174	127	180	227
Others 4/	57	39	33	45	51	66
Total	590	880	1,589	1,608	962	761
<u>Imports</u>	46	45	61	91	58	60
<u>Production</u>						
Butter	1,376	1,578	1,647	1,541	1,566	1,600
Lard	2,918	2,509	2,248	2,564	2,840	2,600
Cottonseed oil 5/	1,730	1,840	2,106	1,723	1,893	1,675
Soybean oil 5/	2,611	2,856	2,767	3,376	3,876	4,510
Others 4/ 5/	526	539	660	560	627	625
Total	9,161	9,321	9,427	9,763	10,802	11,010
<u>Total supply</u>	9,797	10,245	11,078	11,462	11,822	11,831
<u>Exports 6/</u>						
Butter	3	14	45	190	250	
Lard	751	514	456	587	718	
Cottonseed oil 5/	127	55	402	716	617	
Soybean oil 5/	437	413	488	714	1,295	
Others 4/ 5/	62	39	119	33	44	
Adjustment 7/	52	74	117	124	62	
Total	1,432	1,110	1,625	2,364	2,986	
<u>Domestic use</u>						
Butter	1,375	1,352	1,437	1,545	1,520	
Lard 8/	2,071	2,111	1,773	1,959	2,074	
Cottonseed oil	1,404	1,162	1,824	1,543	1,384	
Soybean oil	2,150	2,462	2,326	2,609	2,534	
Others 4/	521	550	589	611	624	
Adjustment 7/	- 52	- 74	-117	-124	- 62	
Total 8/	7,468	7,563	7,834	8,143	8,074	
<u>Total use for food 9/</u>	7,109	7,219	7,541	7,793	7,763	
<u>Per capita, civilian and military</u>						
Butter (fat content)	7.0	6.7	7.0	7.5	7.2	
Other	36.2	36.3	37.2	37.4	36.8	
Total (fat content)	43.2	43.0	44.2	44.9	44.0	

1/ Totals computed from unrounded numbers. 2/ Preliminary. 3/ Forecast except for stocks on October 1, 1956. 4/ Includes beef fats, peanut, corn, olive and sesame oils. 5/ Includes oil equivalent of oilseeds exported for crushing. 6/ Includes shipments. Butter, cottonseed oil and adjustments include quantities from CCC stocks that are not reported in Census data. 7/ Includes exports of processed food oils not classified by kind, shortening and other secondary fats. 8/ Adjusted for estimated changes in stocks on farm. 9/ Excludes food fats used for nonfood purposes but includes nonfood oils (mostly coconut, babassu and palm-kernel) used in food.

Table 29.- Estimated production of fats and oils from domestic materials and oil equivalent of exported domestic oilseeds, year beginning October 1956 with comparisons

Item	Average 1937-41	1950	1951	1952	1953	1954	1955	1956
	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.
Butter (actual weight)	2,224	1,466	1,376	1,578	1,647	1,541	1,566	1,600
Lard and rendered pork fat	2,091	2,812	2,918	2,509	2,248	2,564	2,840	2,600
Edible beef fats 3/	225	158	173	218	255	269	278	275
Total, edible animal fats	4,540	4,436	4,467	4,305	4,150	4,374	4,684	4,475
Corn oil	173	243	223	258	252	268	270	270
Cottonseed oil	1,456	1,227	1,726	1,836	2,101	1,717	1,888	1,675
Edible olive oil	7	2	4	7	2	3	2/	3
Peanut oil	87	190	123	53	82	19	78	
Peanuts (shelled), oil equivalent of exports for crushing abroad 4/	---	21	---	---	69	---	---	80
Soybean oil	500	2,454	2,444	2,536	2,350	2,711	3,143	
Soybeans, oil equivalent of exports 5/	31	272	167	320	416	664	733	4,510
Total, edible vegetable oils	2,254	4,409	4,687	5,010	5,272	5,382	6,112	6,538
Inedible tallow and greases	1,303	2,343	2,268	2,616	2,661	2,825	3,115	2,870
Fish, whale and seal oils 6/	223	164	126	148	161	180	194	195
Total, soap fats and oils	1,526	2,507	2,394	2,764	2,822	3,005	3,309	3,065
Linseed oil 7/	363	808	554	501	631	588	625	
Flaxseed, oil equivalent of exports 8/	---	78	55	9/	122	132	192	660
Tung oil	1	12	14	43	40	15	2	25
Castor oil	---	---	8	11	8	4	1	2
Total, drying oils	364	898	631	555	801	739	819	687
Other fats and oils 10/	5	14	20	36	31	42	33	30
Grand total	8,689	12,264	12,199	12,671	13,077	13,543	14,956	14,795

1/ Preliminary.

2/ Forecasts based on November 1 crop estimates and other indications.

3/ Edible tallow, oleo stock, oleo oil, and oleostearine. Beginning January 1949, use of edible tallow in pressing is subtracted from reported production of tallow.

4/ 43 percent of actual weight.

5/ 9 pounds per bushel, 1937-41; 9.8 pounds in 1950-51; 10.0 pounds in 1952; 11 pounds in 1953-56.

6/ Excludes cod oil and fish liver oils.

7/ Excludes oil equivalent of imported flaxseed.

8/ 19.8 pounds per bushel.

9/ Less than 500,000 pounds.

10/ Neat's foot oil, wool grease, cod and fish-liver oils, and vegetable oils not reported separately by kind.

Compiled from reports of Bureau of the Census, Fish and Wildlife Service, and U. S. Department of Agriculture.

Table 30.- Domestic disappearance of food fats, and fats and oils used in industrial products, year beginning October 1955 with comparisons

Year and Item	Unit	Oct.-Dec.	Jan.-Mar.	Apr.-June	July-Sept.	Total
1953-54						
Butter:						
Actual weight	Mill.lb.	368	342	376	352	1,438
Fat content	Mill.lb.	296	275	303	284	1,158
Margarine:						
Actual weight	Mill.lb.	346	369	309	314	1,338
Fat content	Mill.lb.	282	303	249	254	1,089
Lard (direct)	Mill.lb.	462	442	361	362	1,627
Shortening	Mill.lb.	492	469	479	454	1,894
Other edible 1/	Mill.lb.	331	343	430	391	1,495
Food (fat content):						
Total	Mill.lb.	1,863	1,831	1,822	1,745	7,261
Per person 2/	Lb.	11.4	11.2	11.1	10.6	44.2
Soap 3/ 4/	Mill.lb.	364	342	287	262	1,255
Drying oil products 5/	Mill.lb.	236	204	233	252	925
Other industrial products 4/	Mill.lb.	278	268	301	295	1,142
All industrial products:						
Total	Mill.lb.	877	813	821	809	3,320
Per person 2/	Lb.	5.4	5.0	5.0	4.9	20.2
All products (fat content):						
Total	Mill.lb.	2,740	2,645	2,643	2,553	10,581
Per person 2/	Lb.	16.8	16.2	16.1	15.5	64.5
1954-55						
Butter:						
Actual weight	Mill.lb.	405	385	379	376	1,545
Fat content	Mill.lb.	326	310	305	303	1,244
Margarine:						
Actual weight	Mill.lb.	359	367	323	287	1,336
Fat content	Mill.lb.	288	293	259	234	1,074
Lard (direct)	Mill.lb.	464	428	373	383	1,650
Shortening	Mill.lb.	513	490	505	437	1,945
Other edible 1/	Mill.lb.	356	368	439	417	1,580
Food (fat content):						
Total	Mill.lb.	1,947	1,889	1,882	1,774	7,492
Per person 2/	Lb.	11.7	11.3	11.3	10.6	44.9
Soap 3/ 4/	Mill.lb.	294	279	267	270	1,110
Drying oil products 5/	Mill.lb.	212	221	281	301	1,014
Other industrial products 4/	Mill.lb.	304	309	351	249	1,213
All industrial products:						
Total	Mill.lb.	810	809	898	820	3,337
Per person 2/	Lb.	4.9	4.9	5.4	4.9	20.0
All products (fat content):						
Total	Mill.lb.	2,758	2,697	2,780	2,594	10,829
Per person 2/	Lb.	16.6	16.2	16.6	15.4	64.9
1955-56						
Butter:						
Actual weight	Mill.lb.	399	376	379	366	1,520
Fat content	Mill.lb.	321	303	305	295	1,224
Margarine:						
Actual weight	Mill.lb.	352	393	278	305	1,328
Fat content	Mill.lb.	285	318	225	246	1,074
Lard (direct)	Mill.lb.	457	441	371	371	1,640
Shortening	Mill.lb.	479	523	388	421	1,811
Other edible 1/	Mill.lb.	437	456	413	413	1,719
Food (fat content):						
Total	Mill.lb.	1,979	2,042	1,702	1,746	7,468
Per person 2/	Lb.	11.7	12.1	10.0	10.2	44.0
Soap 3/ 4/	Mill.lb.	302	234	233	230	999
Drying oil products 5/	Mill.lb.	247	274	270	267	1,058
Other industrial products 4/	Mill.lb.	288	359	315	309	1,271
All industrial products:						
Total	Mill.lb.	837	867	818	806	3,328
Per person 2/	Lb.	5.0	5.1	4.8	4.7	19.6
All products (fat content):						
Total	Mill.lb.	2,816	2,909	2,520	2,552	10,796
Per person 2/	Lb.	16.7	17.2	14.8	15.0	63.6

1/ Mainly salad and cooking oils. Includes all oils and fats (other than butter, lard, margarine, and shortening) used in mayonnaise and salad dressing, bakery goods, and confectionery, commercial roasting and frying, etc. 2/ Civilian and military. 3/ Excludes fat equivalent of exports and shipments of soap. 4/ Fat equivalent of soap used in manufactures (rubber, textiles, etc.) is included with "Other industrial products." Prior to 1949, most of the fats and oils used in synthetic detergents is believed to have been reported as used in soap. Beginning in January 1949, this use of fats and oils is entirely included in "Other industrial products." 5/ Paints, varnishes, floor coverings, oilcloth, printing inks, core oils, synthetic resins, insulation, linings, packings, coated fabrics (other than oilcloth), caulking and other protective coatings.

Computed from reports of the Bureau of the Census and United States Department of Agriculture. Total and per person estimates computed from unrounded numbers.

Table 31.- Calculation of domestic disappearance of fats and oils, except butter, used in food, year beginning October 1955 with comparisons

Year and item	Unit	Oct.- Dec.	Jan.- Mar.	April- June	July- Sept.	Total
<u>1953</u>						
Fats and oils used principally for food <u>1/</u>						
Production	:Mil. lb.	2,534	2,174	1,648	1,422	7,778
Net exports	:Mil. lb.	466	412	392	250	1,520
Increase (+) or decrease (-) in stocks	:Mil. lb.	+408	+129	-335	-324	-122
Nonfood uses	:Mil. lb.	136	135	128	101	500
Other fats and oils, food uses <u>2/</u>	:Mil. lb.	44	59	57	66	225
Net domestic disappearance of fats and oils for food (butter excluded)						
Total	:Mil. lb.	1,567	1,556	1,519	1,461	6,104
Per person, civilian and military	:Lb.	9.6	9.5	9.2	8.9	37.2
<u>1954 3/</u>						
Fats and oils used principally for food <u>1/</u>						
Production	:Mil. lb.	2,581	2,174	1,758	1,727	8,240
Net exports	:Mil. lb.	772	534	368	412	2,086
Increase (+) or decrease (-) in stocks	:Mil. lb.	+130	-28	-268	-215	-381
Nonfood uses	:Mil. lb.	131	146	136	120	533
Other fats and oils, food uses <u>2/</u>	:Mil. lb.	71	58	55	60	244
Net domestic disappearance of fats and oils for food (butter excluded)						
Total	:Mil. lb.	1,621	1,579	1,577	1,472	6,248
Per person, civilian and military	:Lb.	9.8	9.5	9.4	8.8	37.4
<u>1955 3/</u>						
Fats and oils used principally for food <u>1/</u>						
Production	:Mil. lb.	2,944	2,554	2,002	1,723	9,223
Net exports	:Mil. lb.	807	681	638	539	2,665
Increase (+) or decrease (-) in stocks	:Mil. lb.	+382	+39	-92	-333	-4
Nonfood uses	:Mil. lb.	150	154	134	132	570
Other fats and oils, food uses <u>2/</u>	:Mil. lb.	53	60	74	66	253
Net domestic disappearance of fats and oils for food (butter excluded)						
Total	:Mil. lb.	1,658	1,739	1,397	1,451	6,245
Per person, civilian and military	:Lb.	9.8	10.3	8.2	8.5	36.8

1/ Includes lard, oleo oil, oleo stock, oleo stearine, edible tallow, corn, cottonseed, peanut, soybean and edible olive oil. Production and exports include oil equivalent of exported soybeans and peanuts for crushing abroad. Net exports also include margarine, shortening and vegetable stearine, and shipments. Change in stocks includes secondary oils, shortening, margarine and estimates for farm lard.

2/ Mainly babassu, coconut, palm-kernel and sesame oils.

3/ Preliminary.

Compiled from reports of the Bureau of the Census and United States Department of Agriculture. Totals and per person estimates computed from unrounded numbers.

Table 32.- Inedible tallow and greases: Apparent production, disposition and price

Period	Apparent production 1/	Factory consumption in				Net imports (+) or net exports (-)	Stocks, end of period	Price per pound, prime inedible tallow, Chicago
		Soap	Fat splitting 2/	Feed	Other products	Total		
	MIL. LB.	MIL. LB.	MIL. LB.	MIL. LB.	MIL. LB.	MIL. LB.	MIL. LB.	Cents
Average								
1937-41	1,167	965	3/	3/	193	1,158	2	6.28
1942-46	1,749	1,398	4/247	3/	5/165	1,810	25	9.24
1947	2,023	1,526	193	3/	163	1,882	68	19.2
1948	1,940	1,451	185	3/	145	1,782	87	16.0
1949	2,132	1,346	169	3/	151	1,666	431	6.4
1950	2,272	1,363	229	3/	215	1,807	534	8.8
1951	2,256	1,195	243	3/	222	1,660	534	12.1
1952	2,318	1,084	187	3/	270	1,541	747	5.5
1953								
January-March	669	277	58	3/	70	405	240	4.3
April-June	695	248	64	3/	83	394	307	3.9
July-September	646	216	63	3/	68	346	328	4.0
October-December	681	286	67	3/	70	423	321	5.3
Year	2,690	1,026	252	3/	290	1,568	1,196	4.4
1954								
January-March	680	260	68	28	59	445	273	7.0
April-June	627	219	58	22	74	373	273	6.6
July-September	673	202	53	21	87	363	316	5.9
October-December	699	226	63	40	79	408	297	7.0
Year	2,679	907	242	111	299	1,559	1,158	6.6
1955								
January-March	703	221	70	26	82	397	304	7.4
April-June	704	207	71	33	91	402	320	6.5
July-September	719	204	63	32	64	364	339	7.2
October-December	773	229	74	31	72	406	328	7.7
Year	2,898	861	278	122	309	1,570	1,291	7.2
1956								
January-March	812	203	80	36	78	397	372	6.8
April-June	817	205	77	49	73	404	425	6.7
July-September	713	203	58	55	61	376	362	6.4

1/ Computed from factory consumption, trade and stocks. 2/ Beginning in 1949, soap manufacturers were not required to report the consumption of fats and oils in fat-splitting, the resultant production of fatty acids nor the subsequent consumption of fatty acids in soap when such splitting was merely the first step in the production of soap. Instead, the reported consumption of fats and oils in soap included both the fats and oils used directly and those used in fat splitting if the fatty acids were used in soap. 3/ Not available. 4/ 1943-46 average. 5/ Residual.

Totals computed from unrounded data.

Table 33.- Number and average live weight of total commercially slaughtered hogs, yield of lard per hog and per 100 pounds live weight, and total commercial production of lard

Year beginning October	Hog slaughter		Yield of lard per		Lard
	Number	Average live weight	Hog slaughtered	100 pounds	production 1/
	Thousand	Pounds	Pounds	Pounds	Million pounds
1946	60,863	250	32.3	12.9	1,963
1947	60,514	245	31.2	12.7	1,887
1948	62,600	245	33.7	13.8	2,112
1949	68,876	239	33.4	14.0	2,301
1950	74,546	241	33.6	13.9	2,506
1951	78,027	237	33.8	14.2	2,634
1952	70,513	235	32.1	13.6	2,261
1953	63,460	238	32.0	13.4	2,028
1954	70,873	239	33.3	14.0	2,363
1955 2/	80,589	233	32.7	14.0	2,635
1956 3/	74,000	238	32.4	13.6	2,400

1/ Data in table 29 includes estimate for farm lard.

2/ Preliminary.

3/ Forecast.

Oil Prices

Last season, prices of the major edible vegetable oils rose sharply through the spring under the impetus of strong export demand. Cottonseed oil prices trended upward from 11.1 cents per pound (crude, Southeast mills) in November 1955 to 15.6 cents in May 1956, then declined to 12 cents in September. They strengthened in October and in mid-November were 13.8 cents, 23 percent higher than a year ago. Soybean oil prices also trended upward from a seasonal low of 11.0 cents per pound (crude, midwest mills) last fall to 15.3 cents in May 1956. Subsequently, prices declined to 11.2 cents in September. Demand strengthened somewhat last month and in mid-November soybean oil prices at Decatur were 13.4 cents per pound, 20 percent above a year earlier.

Prices of vegetable oils probably will average near present levels at least through the winter as a strong export demand will readily take the large excess of output over domestic requirements. Last year, crude soybean oil prices averaged 12.5 cents and cottonseed oil 13.0 cents per pound, a spread of half a cent. The spread may widen this year because of the record soybean crop and the smaller supply of cottonseed oil.

Table 34.- Wholesale prices, of fats, oils and oilseed meals, specified markets, year beginning October

Fats and oils, per pound							
Item	Oct. 1955-Sept. 1956						
	1952-53	1953-54	1954-55	Range		Average 12 months	Mid-Nov. 1956
				Low	High		
	Cents	Cents	Cents	Cents	Cents	Cents	Cents
Butter, 92-score, Chicago	66.6	61.4	57.8	57.4	60.3	58.4	62.0
Lard, tank carlots, Chicago	10.1	16.2	11.5	9.0	11.6	10.3	12.8
Cottonseed oil, crude, S. E. mills	14.2	13.6	13.4	11.1	15.6	13.0	13.8
Soybean oil, crude, tank cars, Midwest mills	12.1	13.5	11.9	10.9	15.3	12.5	13.4
Corn oil, crude, tanks, f.o.b. mills	14.2	14.2	13.4	11.8	15.9	13.5	14.2
Peanut oil, crude, tanks, f.o.b. mills	21.8	17.8	18.2	13.1	18.1	16.1	15.8
Edible tallow, loose, Chicago	6.5	10.4	9.5	8.4	10.6	9.4	12.8
Olive oil, imported, edible, drums, New York	34.0	30.7	31.2	32.0	51.5	42.8	44.0
Margarine, white, domestic vegetable, Chicago	27.5	27.2	25.9	26.0	28.0	27.0	27.0
Shortening, cottonseed, hydrogenated, 10 drum lots, New York	22.5	23.2	22.2	19.2	24.8	21.8	23.2
Inedible tallow, prime, Chicago	4.3	6.2	7.0	6.2	7.8	6.9	7.2
Grease, yellow, Chicago	3.4	5.5	6.4	5.5	7.1	6.3	5.9
Coconut oil, crude, tank cars, Pacific Coast 1/	18.5	17.2	14.9	13.4	15.8	14.1	13.9
Linseed oil, raw, tank cars, Minneapolis	14.8	15.1	13.1	12.7	15.9	13.9	13.7
Palm oil, Congo, drums, New York	12.4	12.5	12.8	13.0	16.1	14.4	15.5
Castor oil, dehydrated, tanks, New York	29.4	22.4	20.7	20.8	24.1	22.6	23.0
Tung oil, tanks, New York	30.8	23.0	23.3	23.3	26.7	24.9	23.0
Menhaden oil, crude, f.o.b. Baltimore	6.7	7.4	8.1	8.5	9.0	8.8	11.0
Oilseed Meals, per ton 2/							
	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.
Copra meal, Los Angeles	82.55	67.40	70.25	63.20	74.25	68.60	71.75
Cottonseed meal, 41 percent protein, Memphis	71.95	66.85	64.25	50.40	63.10	54.85	57.00
Linseed meal, 36 percent protein, Minneapolis	73.25	69.95	65.25	51.40	66.10	58.85	58.50
Peanut meal, 45 percent protein, f.o.b. S. E. mills	76.40	79.05	73.80	51.00	62.50	55.75	58.00
Soybean meal, 44 percent protein, Chicago	80.05	89.80	71.50	58.05	71.90	63.50	59.20
Soybean meal, 44 percent protein, bulk, Decatur	67.55	78.65	60.70	46.90	60.75	52.65	48.00

1/ Three cents added to allow for tax on first domestic processing.

2/ Bagged carlots except soybean meal at Decatur, which is bulk.

Lard prices remained relatively low through most of the 1955-56 marketing season, averaging 10.3 cents per pound (tank carlots, Chicago). With supplies lower, prices in 1956-57 will average above this past year. Last year, lard prices were well below those for the edible vegetable oils because of large supplies. This encouraged a shift from the oils to lard in both shortening and margarine. As supplies of lard in 1956-57 will be considerably less than last year, the price relationship between lard and edible oils probably will discourage the use of as much lard in these products.

Butterfat support prices have been at 81 percent of parity since April 1956 and prices have averaged around support. Prices after March 1957 will depend mainly on the level of support to be established for the dairy marketing year which will start on April 1, 1957. By present legislation, it can be between 75 and 90 percent of parity.

Inedible tallow and grease prices in 1955-56 averaged 6.9 cents per pound (prime, tank cars, Chicago), about the same as a year earlier, otherwise the highest since 1950-51. Record exports of 1.5 billion pounds, about 18 percent more than the previous year, were a supporting factor. As little change in domestic disappearance is expected, prices in 1956-57 to a large extent will again depend upon export demand, which is expected to be strong. Some increase in prices is possible.

Total Uses of Fats and Oils Down About a Pound

Domestic disappearance of all fats and oils in the marketing year that ended on September 30, 1956 was 63.6 pounds (fat content) per person (civilian and military). This was about 1.3 pounds less than last year and the lowest since 1946 (table 30).

Food uses totaled 44.0 pounds (fat content), nearly a pound less than a year earlier. Consumption of margarine declined 0.2 pounds whereas butter declined 0.3 pounds per person. Margarine at 7.8 pounds (actual weight) compared with 8.0 a year earlier, while butter at 9.0 pounds compares with 9.3 pounds the previous year. The decrease in butter reflects higher prices in the second half of the marketing year. Disappearance of lard at 9.7 pounds was 0.2 pounds less than last year but shortening declined a pound to 10.7 per person. About 403 million pounds of lard were used in shortening compared with 291 a year earlier because lard was lower priced than the edible vegetable oils. Other food uses (cooking and salad oils, etc.) increased about half a pound. This latter category has been trending upward in recent years. Consumption of food fats and oils in 1956-57 is not likely to change materially from the present levels. Some increase in "other" food uses category is likely. Less lard but more vegetable oils probably will be used in shortening and margarine.

Soap continues to decline in importance as an outlet for fats and oils as synthetic detergents take a larger share of the soap market. Domestic disappearance of soap declined from 1,110 million pounds in 1954-55 to 999 million pounds in 1955-56. This trend probably will continue in 1956-57. More fats and oils were consumed in drying oils and other industrial products because of the high level of economic activity.

Inedible tallow and greases consumption has remained relatively stable during the past few years (table 32). Declining use in soap has been offset by an expansion in other outlets such as fatty acids and animal feeds. Exports the past crop year were at a record level. The outlook for 1956-57 is for continued heavy exports, and domestic use near last year's level. Supplies will be about 6 percent less than last year.

HIGH PROTEIN FEEDS

Larger High-Protein Feed Supply in Prospect

The total quantity of the principal high-protein feeds for the 1956-57 feeding season is estimated at 12.8 million tons (soybean meal equivalent), compared with 12.0 million last year and the 1950-54 average of 11.5 million. The tonnage available also is expected to be larger in relation to the number of livestock consuming these feeds.

The prospective increase in high-protein feeds for 1956-57 is in soybean meal. Total output of soybean meal from the record crop may be about 1.0 million tons above the 6.5 million in 1955-56. Cottonseed meal production is expected to be about 2.3 million tons compared with 2.6 million a year ago. Linseed, peanut and copra meal output are not expected to change materially from the 1955-56 levels. Total production of the 5 oilseed meals in 1956-57 is estimated at 10.6 million tons compared with 9.9 million in 1955-56.

Exports during the new feeding season are expected to continue very large. Declining imports during recent years and sharply rising exports have resulted in little net change in the volume available for livestock feeding in spite of a substantial increase in production. The quantity of oilseed cake and meal fed to livestock in 1955-56 was 9.2 million tons, 8 percent more than in 1954-55. Even with larger exports in 1956-57 and with stocks of oilseed meals increasing, about 700,000 tons more are expected to be available for feeding to livestock.

Table 35.- High-protein feeds: Quantity fed per animal unit, United States, average 1949-53, annual 1950-55

Item	Unit	Year beginning October						
		Average 1950-54	1951	1952	1953	1954	1955 ^{1/}	1956 ^{2/}
Total protein feed (soybean meal equiv- alent) ^{3/}	1,000 tons	11,482	11,651	11,503	11,614	11,365	11,995	12,800
Protein-consuming animal units ^{4/}	Million	101.0	102.0	100.2	100.2	101.5	103.8	103.0
Quantity per animal unit	Pounds	227	228	230	232	224	231	248

^{1/} Preliminary. ^{2/} Preliminary estimates based on indications in November. ^{3/} In terms of soybean meal equivalent (44 percent protein content). ^{4/} High-protein feed-consuming livestock. Based on animal units of grain-consuming livestock, excluding horses and mules, adjusted for importance of high-protein feeds in total concentrates fed.

The conversion factors for computing soybean meal equivalent and protein-consuming animal units, and data for earlier years are given in The Feed Situation, Jan. 4, 1955.

Table 36.- Oilseed cakes and meals: Supply and distribution, United States, year beginning October, 1953-54 and 1954-55

Oilseed cake and meal	Supply				Distribution			
	Stocks (Oct. 1) ^{1/}	Pro- duction	Imports	Total	Feed	Other uses ^{2/}	Exports	Stocks (Sept. 30) ^{1/}
	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons
1953-54								
Soybean	57	5,051	16	5,124	4,965	30	67	62
Cottonseed	3/142	3,019	70	3,226	2,925	30	66	205
Linseed	23	577	1	601	526	---	35	40
Peanut	2	63	1	66	63	---	2	1
Copra	6	116	80	202	196	---	0	6
Total	230	8,821	168	9,219	8,675	60	170	314
1954-55								
Soybean	62	5,705	0	5,767	5,428	30	272	37
Cottonseed	205	2,515	32	2,752	2,404	30	168	150
Linseed	40	545	0	585	488	---	75	22
Peanut	1	19	0	20	17	---	2	1
Copra	6	117	63	186	182	---	0	4
Total	314	8,901	95	9,310	8,519	60	517	214
1955-56 ^{4/}								
Soybean	37	6,546	0	6,583	6,042	30	400	111
Cottonseed	150	2,628	59	2,837	2,511	30	155	141
Linseed	22	582	0	604	439	---	153	12
Peanut	1	57	0	58	37	---	18	3
Copra	4	112	45	161	160	---	0	1
Total	214	9,925	104	10,243	9,189	60	726	268

^{1/} Stocks at processors' plants. ^{2/} Estimated quantities of soybean meal used for industrial purposes and cottonseed meal used for fertilizer on farms of cotton growers. ^{3/} Includes 29,000 tons owned by CCC and not stored at processors' plants. ^{4/} Preliminary.

Prices of soybean meal this feeding year are expected to average somewhat lower than the 1955-56 season average of \$52.65 per ton, bulk, Decatur. In 1955-56, soybean meal prices were fairly stable from November through March, then rose about 20 percent by June, but trended downward the last quarter of the feeding season. Prices dropped this fall but in mid-November were \$48 per ton, about the same as a year earlier. Prices could strengthen somewhat during the year, but are not likely to rise as much as in the latter half of the past feeding season. Cottonseed meal prices currently are higher than a year earlier and likely will continue higher this winter and spring. A reduction of 10 percent in the prospective supplies of cottonseed, poorer pasture conditions and smaller feed grain crops in the Southwest probably will keep the demand for cottonseed meal fairly strong. Linseed meal prices are currently 10 percent lower than a year ago.

FOREIGN TRADE OUTLOOK

Fats and Oils Exports to Continue at High Level

In 1955-56, the United States exported (including shipments) about 5.0 billion pounds of fats, oils and the oil equivalent of oilseeds. This was 800 million pounds more than the previous high attained the year before and was reflected in a sharp cut in stocks of food fats and linseed oil. Exports were equal to about 35 percent of total production from domestic materials. Record quantities of edible vegetable oils, soybeans, flaxseed, and tallow and greases were shipped abroad. Butter and lard exports were above a year earlier (table 44). Butter exports consisted largely of donations from CCC stocks.

U. S. exports of food fats and oils (other than butter) in the year ended September 30, 1956 reached a new high of 2.7 billion pounds, including the oil equivalent of soybeans. This was 29 percent above the record established the preceding year. Cottonseed and soybean oil exports in 1955-56 rose by 54 percent to a record total of 1,170 million pounds; soybean exports reached a new high of 67 million bushels (equivalent to about 735 million pounds of oil) and 10 percent above a year earlier; exports of lard (excluding shipments to U. S. Territories) were up 25 percent at 662 million pounds. In addition there were exports of edible beef fats, margarine, and shortening.

Table 37.- World exports of fats, oils and the oil equivalent of oilseeds 1/, calendar years, 1951-56

Commodity	1951	1952	1953	1954	1955	Forecast 1956
	1,000 short tons	1,000 short tons	1,000 short tons	1,000 short tons	1,000 short tons	1,000 short tons
Food						
Butter <u>2/</u> - World	385	365	390	400	500	405
U. S.	9	3/	10	22	92	70
Other	376	365	380	378	408	335
Lard - World	395	360	275	290	340	370
U. S.	344	317	211	233	281	300
Other	51	43	64	57	59	70
Soft oils <u>4/</u> -World	1,474	1,263	1,544	1,811	2,142	2,260
U. S.	454	293	291	626	764	990
Other	1,020	970	1,253	1,185	1,378	1,270
Lauric acid oils <u>5/</u>						
World	1,995	1,640	1,535	1,690	1,720	1,795
U. S.	---	---	---	---	---	---
Other	1,995	1,640	1,535	1,690	1,720	1,795
Palm oil - World	520	570	605	632	595	625
U. S.	---	---	---	---	---	---
Other	520	570	605	632	595	625
Whale oil - World	435	460	420	454	418	425
U. S.	3/	3/	3/	3/	3/	3/
Other	435	460	420	454	418	425
Non-Food						
Tallow and greases -						
World	380	520	775	755	800	1,000
U. S.	276	392	621	599	663	850
Other	104	128	154	156	137	150
Linseed - World	480	225	335	670	515	520
U. S.	46	28	46	315	120	140
Other	434	197	289	355	395	380
Other <u>6/</u> - World	481	401	436	464	506	500
U. S.	25	23	54	71	72	80
Other	456	378	382	393	434	420
Grand Total - World	6,545	5,804	6,315	7,166	7,536	7,900
U. S.	1,154	1,053	1,233	1,866	1,992	2,430
Other	5,391	4,751	5,082	5,300	5,544	5,470

1/ Includes 22 major fats and oils commodities that enter world trade. Does not include about 100 million pounds of "other" U. S. exports and also shipments to U. S. Territories.

2/ Fat content.

3/ Less than 500 tons.

4/ Cottonseed, peanut, soybean, sunflower, sesame, rapeseed and olive oils.

5/ Coconut and palm kernel oils.

6/ Babassu kernel, castor oil, tung, perilla, sperm, whale and fish oils.

Foreign Agricultural Service, Fats and Oils, Division.

The major factors that led to the large exports of fats and oils in 1955-56 included a high level of economic activity abroad with resultant strong demand from foreign consumers, short supplies of olive oil in Mediterranean countries and of sunflowerseed and linseed oils in Argentina, and large U. S. sales under Title I of Public Law 480, which provides for payment in foreign currencies. Some of the largest U. S. exports of food fats in 1955-56 were 157 million pounds of cottonseed oil to Argentina, which is usually a substantial net exporter of edible oils; 431 million pounds of cottonseed and soybean oils to Spain, where consumption of edible oils is rising rapidly; 160 million pounds of cottonseed oil to Western Germany to help meet a strong demand for margarine; 190 million pounds of lard to the United Kingdom, 165 million pounds to Cuba and 96 million pounds to Yugoslavia; and 20 million bushels of soybeans to Japan. The exports to Argentina and most of those to Yugoslavia and Spain were under P. L. 480. The lard to the United Kingdom was largely financed by allocations from funds of the International Cooperation Administration.

The outlook for U. S. exports of edible fats and oils in 1956-57 is about as favorable as the situation in 1955-56. The annual increase in the population of the world outside the United States calls for 300 to 400 million pounds more of edible fats each year merely to hold per capita consumption constant. Economic activity abroad is continuing at a high level and stocks of fats, oils and oilseeds this fall were at a relatively low level. The troubled situation in the Near East is a special factor this year which could lead to increased buying by importing countries to build up reserves against contingencies.

These demand factors are largely offset, however, in their effect on the outlook for U. S. exports, by the likelihood of a moderate increase in foreign production of edible fats and oils in 1956-57. Production in Argentina is now increasing sharply as a result of a rapid recovery in the production of sunflowerseed. With one or two exceptions, the Mediterranean countries will produce more olive oil in 1957 than in 1956. The moderate long-term upward trend in world production of coconut and palm oils probably will continue. Large quantities of these oils are used in Europe for food products. A slight increase is estimated in 1956-57 peanut production outside the United States. There is a large increase in the estimated Indian peanut crop, but this is partly offset by declines in the West African crops.

Without taking into account the possible effect of foreign buying to build up stocks, exports of U. S. edible oils and fats other than butter in 1956-57 are likely to reach about 2.7 billion pounds, including oil equivalent of soybeans. This would include about 1.1 billion pounds of soybean and cottonseed oils (table 38), over 75 million bushels of soybeans (roughly 850 million pounds in terms of oil) and about 600 million pounds of lard. Exports of butter probably will decline sharply because CCC stocks have been exhausted.

Cottonseed and soybean oils to be shipped in 1956-57 against Title I agreements that had been announced by mid-November 1956 total about 500 million pounds. About 110 million pounds will be shipped against authorizations announced up to the same date by the International Cooperation Administration. Regular commercial purchases by Germany are expected to increase this year, and the Netherlands, Canada, and other countries probably will continue to be good customers for edible oils. Exports of soybeans in 1956-57 are likely to increase in response to lower average prices and to an increased demand from Japan and Northern Europe. The reduced U. S. production of lard probably will be reflected in smaller commercial exports, but the quantities to be shipped in 1956-57 under Title I programs announced by mid-November are nearly as large as total Title I lard exports in 1955-56.

Exports of Oilseed Meals Likely to Remain High

Demand in Europe for oilseed meals continues heavy and may even increase in 1956-57. Another factor that favors increased exports from the United States is the probability the U. S. oilseed meal prices will average lower than last year, as production of meals per animal unit will be larger. An offsetting factor, however, will be increased supplies from other parts of the world.

The strong European market in the past two years for meals of U. S. origin has been due, not only to the rising demand in Europe but also to a sharp decline in Argentine supplies, reflecting small sunflower and flaxseed crops. Also, U. S. prices for oilseed meals have declined sharply during the past 2 marketing years. In 1956, however, production in Argentina has recovered sharply and the exportable supply from Argentina, formerly a major exporter, is likely to be far larger than the small quantity exported in 1955-56. Total exportable supplies from other parts of the world have not shown such a sharp variation and are likely to remain roughly the same as last year.

A prolonged blockage of the Suez Canal would have a considerable effect on the competitive position of U. S. oilseed meals by hindering the movement of oilseeds and meal from the Far East to Europe. In 1955, 1.5 to 2.0 million tons, meal equivalent, equal to roughly a third of European imports, moved through the Suez Canal.

Little Change in Imports

Imports of oils and oilseeds in 1956-57 are not expected to differ greatly from the 1 billion pounds (oil basis) of a year earlier. Usually about 575-600 million pounds are coconut oil and copra from the Philippines. Next in order is about 125 million pounds of castor oil and beans from Brazil and India. Imports of olive oil, mostly from Spain, palm oil and various fish and marine oils ordinarily average about 50-60 million pounds each. Smaller quantities of palm kernel, tung and other oils also are imported.

Table 38.- Cottonseed and soybean oils: U. S. exports in 1955-56 and forecasts for 1956-57

Country or area	Year beginning October 1					
	1955			1956		
	Under : P.L. 480 :	Other : 1/ :	Total :	Under : P.L. 480 : 2/ :	Other : 1/ :	Total :
	Mil.lb.	Mil.lb.	Mil.lb.	Mil.lb.	Mil.lb.	Mil.lb.
Europe						
Belgium, Germany, Netherlands	---	197	197	---	250	250
Greece	39	34	73	47		
Italy	26	4	30	160	3/30	
Spain	275	156	431	169	3/80	
Yugoslavia	---	---	---	15		
Other	---	3	3			
Total	340	394	734			790
Canada	---	59	59			60
Latin America						
Argentina	157	---	157			---
Chile	27	43	70	48		
Colombia	14	---	14			
Ecuador	8	1	9	2		
Peru	8	---	8			
Other	---	37	37	2		
Total	214	81	295			115
All others						
Algeria and French Morocco	---	45	45			
Iran	---	---	---	6		
Israel	13	---	13			
Korea	---	---	---	10		
Pakistan	---	1	1	15		
Turkey	---	---	---	21		
Others	---	20	20			
Total	13	66	79			135
Grand total	567	600 4/1,173	2/495			1,100

1/ Includes I.C.A. financing. 2/ Title I programs announced plus carry-over from last marketing year. 3/ Announced I.C.A. programs. 4/ Includes 6.5 million pounds under a Government Relief program (Section 416) for which no country breakdown is available.

APPENDIX

The following statements, usually presented at the Agricultural Outlook Conference are included here because of general interest in them.

CURRENT RESEARCH IN MARKETING FATS, OILS AND OILSEEDS BEING
CARRIED ON IN MARKETING RESEARCH DIVISION, AMS 1/

Soybeans 1. The economic significance of different methods and practices in evaluating soybeans as marketed by farmers and others is being studied. The relationships between the various laboratory test results and individual grade factors, including test weight, moisture, splits, damage, and foreign material, are being determined and converted to terms of economic importance. Gross values of oil and meal content, adjusted for processing costs, are being used to indicate the extent to which existing grade standards and alternative methods reflect quality characteristics valued most in the market.

2. An analysis of existing marketing methods and practices for soybeans and their products in relation to marketing costs and margins indicated a trend toward increased economic efficiency, marked by new basic methods, larger plants, fuller utilization of plant facilities, longer-season operation, better location planning and transportation management. Resulting economies appear in labor and power costs, interest, upkeep and depreciation, with a lower net cost of processing a bushel of beans in the better planned and managed plants.

Newer mills repeatedly exhibit lower costs than older mills of similar type, suggesting that continuing economies are feasible. These cost variations suggest study of specific possibilities for further increased efficiency. A report will be released within the next twelve months.

3. The study of effects of changes in processing methods upon the soybean industry, market outlets, and returns to growers shows that normally the larger the mill, the lower is the processing cost, but a somewhat higher cost of marketing the meal. A savings in cost of 9 cents per bushel or \$3.00 per ton could be gained by expanding the daily capacity of a solvent-extraction mill from 50 to 1,000 tons of beans. Most of this saving is accomplished by expansion up to the 400-ton-per-day size. However, with the increase in size of mill, meal revenue per ton declines in approximately the same amount as total cost per ton, thus resulting in approximately the same net revenues per bushel of beans processed by different size mills.

An industrywide increase in the size of soybean oil mills could result in only small benefits to farmers in the form of higher prices for soybeans. Approximately 3 cents per bushel of beans was estimated as the biggest rise in price which could be expected from a reorganization of the industry into few but larger mills. This report will be available in January 1957.

1/ Statement prepared by Marketing Research Division, AMS.

4. The effect of aerating soybeans in commercial storage will be tested in Indiana. The use of aeration is known to minimize the turning required for stored grain, and may prove effective for stored soybeans.

Cottonseed 5. A study of power and labor utilization in cottonseed oil mills showed that there is wide variation in mill operating conditions and practices, and that it causes corresponding variations in labor and power costs. In the Southeast, 70 percent of the mills operated on 12-hour and 30 percent on 8-hour shifts. In the Southeast, Mississippi Valley, and Southwest, 16, 23, and 34 percent of the mills produced the power they used. Screw-press mills were the highest users of power and hydraulic mills the lowest; but in labor usage, hydraulic mills were highest and solvent-extraction mills lowest. Most mills operated at less than normal capacity, causing higher costs per ton of seed. This report is to be available in the summer of 1957.

6. Economies in converting small cottonseed oil mills into higher oil-yielding type mills are definitely possible. Five hydraulic mills, varying in daily capacity from 50 to 150 tons of seed and in annual capacity from 4,000 to 40,000 tons, were studied. Findings so far indicate that, within the size range studied, conversion to a modern screw-press mill would attain the highest return per dollar of any alternative new investment including prepress and solvent extraction. Return per dollar of new investment was estimated to be about 25 cents for the average size crush (15,000 tons) and as high as 70 cents for a larger crush (about 29,000 tons). A completed report should be available by late spring of 1957.

Other oilseeds 7. A study is being made of flaxseed storage practices relating to deterioration, costs, and returns to growers in the North Central area, to analyze the economics of storage and to learn which methods and practices would be most efficient. A preliminary report should be available by late summer of 1957.

8. Analysis of factors affecting outturns and quality of castorbean products and their relationship to characteristics of the castorbean indicated that: (1) Oil content of different varieties varies significantly, (2) cracked and broken castorbeans contain more oil than whole sound beans, and (3) oil from cracked and broken beans is somewhat lower in quality with respect to iodine number and free fatty acid. A preliminary report has been issued.

9. Analysis is being continued of factors affecting outturn and quality of tung nut products and their relationship to characteristics of the tung nuts. Data from the 1954-55 crop have been analyzed, but no final conclusions can be drawn from one season's observations. No data were collected during the 1955-56 season of very severe freeze damage.

Tallow and Grease 10. An analysis of marketing practices, costs and margins in the tallow and grease industry as related to raw material supplies and the uses of tallow and grease is underway. This study indicates that about 48 percent of the plants and 70 percent of the shipments of the products of the rendering industry originated in the North Atlantic and East North Central States, which contain close to 50 percent of all meat packing plants and the greatest concentration of population. Few rendering plants were found in the "deep" South and in the Mountain States. A preliminary report should be available by late spring of 1957.

Cross Commodity 11. Marketing margins for cottonseed and soybeans used in the manufacture of food products, with emphasis on margarine and shortening, is under study. Preliminary analysis indicates that the calculated farm value of soybean oil in 1940 was about 20 percent of the value of an equivalent quantity embodied in margarine. In 1945 and 1950 the farmer's share of the soybean oil content of margarine was up to 40 percent. By 1955 it had decreased to 25 percent. Cottonseed oil ratios were lower at each step in the marketing channels during this period. A preliminary report has been issued.

12. Evaluation of the effect of coupons and "special offers" on the sales of food fats and oils at the retail level included an analysis of consumer purchase data from a sample of 500 panel families in Chicago. Data on purchases of each of butter, margarine, shortening, and cooking oils include date of purchase, brand, quantity, price paid, and whether any coupons or "special offers" were involved. Analysis of data has begun, and a report may be ready next summer.

13. A study was made to appraise the market potential for oilseed products in public and private institutional outlets. The study was directed at determining (1) the kinds and quantities of protein sources used in institutional diets; (2) the economic and nutritional importance of protein sources as a part of the diet of inmates; (3) the adequacy of the level of other nutrients in the diet; and (4) the economic and nutritional effect of supplementing institutional food supplies with an inexpensive protein materials such as oilseed protein. Data have been analyzed, and a report is to be available in early 1957.

14, 15. The study of the development of new and expanded market outlets for fatty acids and their derivatives has shown that the chemical industry represents a large potential market for fats and oils, but in order to determine the extent of this market, it will be necessary to study it by individual segments. Therefore, a study is being conducted to evaluate the existing and potential market for fats and oils of agricultural origin in plasticizers as a means of assisting in the development of this market.

16. Study has been initiated in new and expanded outlets for inedible fats in feeds to evaluate the existing and potential market.

17. A study is being conducted to measure the incidence, usage, and costs of inorganic nitrogen source compounds as feed mixing ingredients; to evaluate the importance of these compounds in terms of the overall feed protein requirements of the livestock feeding industry; and to appraise the effects of new and expanded uses of these compounds in feeds upon the existing markets for natural protein source feeds.

18. Marketing organization and practices for mellorine are being studied under contract. Returns from a survey of 442 plants that make mellorine are being summarized. Several market areas will be selected for intensive study in the final phase of this project.

19. An analysis of equipment and methods for storage of vegetable fats and oils in relation to costs and margins is being continued. Oils under nearly all conditions tested have retained their original commercial grade; however, they show clear differences in tendency to deteriorate as indicated by peroxide value. Factors apparently most closely related to deterioration are temperature, free access of air, and possibly moisture.

From study of CCC experience with linseed oil in storage, acid number of linseed oil was found to be in excess of tolerance more often than any other factor, while unsaponifiable matter ranked second.

Marketing Research Reports Pertaining to Oilseeds and Fats and Oils
Released During the Past Year

"Relationships Between Lard Production Methods, Volumes of Production, Costs and Characteristics of Lard Produced in Selected Packing Plants," Iowa Agr. Exp. Sta. Res. Bul. 432, October 1955.

"Economic Factors in Marketing Farmers' Castorbeans," USDA, Marketing Research Report 106. November 1955.

"Marketing Margins for Soybean and Cottonseed Oils Used in Margarine and Shortening," Reprint from Marketing and Transportation Situation, January 25, 1956.

"Tank Storage of Fats and Oils and Mill Storage of Oilseeds and Their Products," USDA, Marketing Research Report 122. May 1956.

"Size of Soybean Oil Mills and Returns to Growers," USDA, Marketing Research Report 121. 1956.

"Processing Costs for Soybean Oil Mills," article in Agricultural Marketing, USDA, October 1956.

CURRENT RESEARCH IN UTILIZATION OF FATS, OILS, AND OILSEEDS CARRIED ON
IN SOUTHERN AND NORTHERN RESEARCH BRANCHES ARS 1/

Southern Utilization Branch

The purpose of oilseed research at the Southern Utilization Research Branch is to increase the utilization of peanuts, cottonseed, and tung fruit and to increase the potential of castor and jojoba (*Simmondsia*) as replacement crops. The aim is either to improve the quality of the products of the seed by developing new or improved processing techniques, or to develop new products and create new uses.

An investigation on the nutritive value of different cottonseed meals indicates that there is a definite variation in nutritive performance depending on the conditions of processing. This has opened up new markets for the meal as a major constituent of swine and poultry feeds. Quantitative differences relate to the destruction of certain amino acids and to changes in other constituents of the meal. These quantitative changes offer the best indications of nutritive value obtained so far.

Research has been conducted on tung and castor pomace with the objective of rendering them nontoxic for animal feeds. Results indicate that the toxic material in tung pomace might be rendered nontoxic by treatment with either alkali or ammonia.

Another major line of approach to the economic situation of surpluses is to improve the quality of the edible oils extracted from the oilseeds, as well as to find new uses for derivatives of these oils. Members of the industry have found that reduction of color of cottonseed oil constitutes the most important problem facing the cottonseed oil industry. Laboratory methods have been developed for removing gossypol, the pigment responsible for color, from the oil immediately upon the production of crude oil. Research is continuing on a search for cheap chemicals and processing methods that could be used by processors to improve color without reducing yield of oil.

Cottonseed oil is being evaluated in the preparation of emulsions for intravenous alimentation. Required for this purpose are emulsions of fat that can be given intravenously to supply calories to persons who cannot absorb fat normally in the gastrointestinal tract. This program is supported by the Office of the Surgeon General. While this work does not point to large scale new uses of oil, it provides information that is useful in developing new edible outlets.

1/ Statements prepared by Southern and Northern Utilization Research Branches, ARS.

Considerable work has been undertaken on other edible uses for cottonseed oil; that is, in the formation of derivatives from the oils. This work has been concerned with the development of entirely new products and the improvement of products currently on the market. The development work on acetic-acid-containing fats, the acetoglycerides, has been brought to the point where they are now being commercialized by private companies. Completion of tests underway to establish their suitability for use in food products should greatly expand their markets. Development of another new product, the polymeric fats, is still in the laboratory stage. This product, to cite one example of its possible development, could utilize surplus of fats in formulating compounds for the lubrication of equipment used for processing foods.

Aside from the edible field, many additional industrial uses for vegetable oils are possible. Research to find such uses has been along two lines: First, to find uses for the constituents themselves; and second, to formulate new derivatives and evaluate them. Progress has been made along both of these lines--for example, new chemical derivatives having potential uses as plasticizers, emulsifiers, and sticking agents have been formulated from tung oil, and work has begun on castor and jojoba. Such outlets for the inedible as well as the edible oils should help expand markets.

NORTHERN UTILIZATION BRANCH

Potential Industrial Products from Soybean and Other Oils

Polymers of vinyl esters of soybean fatty alcohols have been prepared in large scale laboratory experiments and are being given a thorough preliminary evaluation for use in protective coatings. Adducts of conjugated soybean fatty acids with maleic anhydride and acrylic acid have been prepared in similar quantities and their derivatives have been shown to be primary plasticizers and stabilizers for vinyl chloride resins. The relative value of these adducts as plasticizers and stabilizers is to be explored. Plasticizers are used for softening and removing brittleness from plastics that are now being used commercially on a large scale. Preliminary investigations show that soybean fatty acids can be used to obtain a mixture of dibasic acids from C_9 to C_{12} . Studies on the cause of and cure for after-yellowing of linseed oil films have been initiated.

Composition and Edible Quality of Soybean and Other Oils

Amino-reductones from corn sugar have been found to be powerful anti-oxidants for liquid soybean oil. Progress was made on the problem of making high melting chocolate-type coatings from domestic fats. Oil from Hawkeye and Clark varieties of soybeans was found to have close to a random distribution of the fatty acids rather than an even distribution as previously reported. Thus, the separation of glycerides which can be achieved by physical means can now be predicted accurately from the unsaturated fatty acid analysis of the oil. Random distribution has been shown previously to be true for linseed oil. Work is in progress on other varieties of soybean and linseed and on safflower to determine glyceride distribution, and on the relation of antioxidants to stability of soybean oil.

Soybean Protein and Meal

Toxicity of soybean oil meal extracted with trichloroethylene has been shown to be present in protein of this meal. Preliminary evidence indicates that particular reaction products of protein with trichloroethylene cause the hemorrhagic toxicity. Phytin can be removed from soybean protein by treatment of protein during extraction with a resin. Removal of phytin shows that protein components as determined by electrophoretic and ultracentrifugal studies are reduced, indicating that phytin combines with soybean protein fractions to give components of different properties. Removal of phytin should permit studies to obtain methods of chemically modifying soybean protein to give products of enhanced industrial value. Further work is in progress.

STATISTICAL REPORTS OF THE CROP REPORTING BOARD RELATING TO OILSEEDS 1/

The Crop Reporting Board issues the following releases containing statistical data on oilseeds:

I. Reports on Acreage

- A. Prospective Plantings as of March 1, released about March 18 each year in Crop Production.

This release gives the intended planted acreage of flaxseed and soybeans grown alone for all purposes and is based on farmers' intentions as reported to the Crop Reporting Board about March 1. This release should not be considered an estimate of acreage to be finally planted as the report itself may cause farmers to change their intentions to plant, acreage quotas for other crops may be changed, and weather conditions or other causes may interfere with the carrying out of farmers' intentions as expressed on March 1.

1/Statement prepared by Crop Reporting Board, AMS.

B. Acreage for Harvest as of July 1 and released about July 10 in Crop Production.

This release gives the estimated acreage to be harvested for flaxseed and soybeans for beans and is based on acreage reported planted by farmers on surveys made in late June. This estimate is subject to revision in the Annual Summary published about December 20 each year.

C. Acreage Harvested released in Crop Production, Annual Summary about December 20 each year.

This release gives for soybeans the estimated acreage grown for all purposes and the acreage harvested for beans, and for flaxseed the acreage planted and harvested. This report is based largely on reports from a sample of farmers secured through the rural carrier surveys and on other data such as State farm censuses.

II. Estimates of Yield and Production

For flaxseed these are made as of the first of each month July through October, and for soybeans, August through November. They are published in the monthly issues of Crop Production issued about the 10th of each month. The estimated yields are based on reports from farmers giving the condition of the growing crops and farmers' estimates of probable yields per acre. The production estimate is derived by multiplying, for each State, the estimated yield by the acreage for harvest as published in the July issue of Crop Production. A year-end estimate of acreage, yield and production is published in the December Annual Summary of Crop Production. In this report the yield estimates are based on final yield reports from farmers.

Estimated production of tung nuts also is shown in the December report. During the period August 1 through December 1 the probable production of cottonseed is quoted in the narrative portion of Cotton Production. This figure is based on the average ratio of lint to seed plus lint. The first estimate of actual production is published in May following harvest in Cotton Production released about May 8. The May report is based on deliveries to oil mills through February 28, and reports from farmers on the production and utilization of cottonseed and the amount of seed cotton required to make a 500 pound gross weight bale as compiled by the Marketing Research and Cotton Divisions, AMS.

III. Revisions

Revised estimates of acreage, yield and production for the previous year are published in the Annual Summary of Crop Production for December. Acreage revisions are based on final tabulations of State farm census data for several important States. Revisions in production estimates are based primarily on indicated production from revised acreage estimates and also on check data for crushings, exports and seed requirements.

IV. Quarterly Stocks in All Positions

These are published quarterly beginning October 1 for flaxseed and January 1 for soybeans and are released about the 30th of the month. Beginning with January 1957 these quarterly stocks reports are to be combined with the quarterly grain stock reports and will be released about the 24th of the month.

V. Prices Received by Farmers

- A. Mid-month average prices: Mid-month average prices received by farmers are published for soybeans, flaxseed, and cottonseed in Agricultural Prices, by States, by regions, and for the United States. Mid-month prices are not estimated for tung nuts.
- B. Season Average Prices: A preliminary estimate by States of the season average price received by farmers for each of the four commodities is published in December of the crop year in the report entitled Crop Values. For soybeans and flaxseed a revised estimate is published the following May in Farm Production, Farm Disposition and Value. A revised estimate for cottonseed is published in the May Cotton Report, and a revised estimate for tung nuts is published in the August issue of Agricultural Prices. The final season average price estimates for these four commodities are published in Crop Values the following December.

Estimates of mid-month and season average prices are based primarily on voluntary reports from buyers and growers with supplemental data from other trade sources and Market News Service reports.

For a detailed description of methods used by the Crop Reporting Board in developing these estimates see The Agricultural Estimating and Reporting Services of the United States Department of Agriculture, USDA Miscellaneous Publication 703.

Price Support Programs for Oilseeds and Oils 1/

Price support programs are available for soybeans, flaxseed, cottonseed and tung nuts during the 1956-57 marketing year.

Support programs were initiated for soybeans, flaxseed, cottonseed and tung nuts during World War II and have been continued except for a few years in the immediate postwar period when there were no support programs for cottonseed and tung. A support program was established for olive oil in 1943 and again in 1951 and 1952. There have been no olive oil support programs since 1952.

The following tables provide summary data on programs for recent years.

Table 39.- Oilseeds and oils price support operations: Acquisitions and dispositions in terms of oil, by crop or program year, 1947-55 1/

Crop year	: Flaxseed and linseed oil (oil basis)	: Cottonseed and cottonseed oil (oil basis)	: Soybeans (oil basis)	: Tung oil	: Olive oil					
begin- ning 2/	: Acqui- sitions	: Dispo- sitions	: Acqui- sitions	: Dispo- sitions	: Acqui- sitions	: Dispo- sitions	: Acqui- sitions	: Dispo- sitions	: Acqui- sitions	: Dispo- sitions
	: Mil. lb.	: Mil. lb.	: Mil. lb.	: Mil. lb.	: Mil. lb.	: Mil. lb.	: Mil. lb.	: Mil. lb.	: Mil. lb.	: Mil. lb.
1947	: 8.6	: 5.6	: No program	: 0	: ---	: 7.8	: 4.3	: No program		
1948	: 655.0	: 9.2	: No program	: 117.1	: 48.0	: No program	: 3.5	: No program		
1949	: 193.0	: 50.0	: 249.5	: 167.0	: .5	: 69.4	: 1.6	: 0	: No program	
1950	: 3/	: 205.1	: 0	: 82.5	: 3	: .4	: 0	: 0	: No program	
1951	: .2	: 84.3	: 136.2	: .7	: .6	: .6	: 0	: 1.6	: 2.6	: 0
1952	: 98.8	: 15.2	: 875.0	: 18.2	: 42.4	: 7.9	: 5.8	: 0	: 3.5	: 0
1953	: 351.0	: 436.5	: 384.1	: 380.7	: .1	: 34.5	: 32.8	: 0	: No	: 1.1
1954	: 173.3	: 466.3	: 227.3	: 926.2	: 159.1	: 146.1	: 0	: 19.3	: pro-	: 2.2
1955	: 1.2	: 208.9	: 0	: 296.8	: 3/	: 13.2	: 0	: 19.3	: grams	: 2.8
Total	: 1,481.1	: 1,481.1	: 1,872.1	: 1,872.1	: 320.1	: 320.1	: 48.0	: 48.0	: 6.1	: 6.1

1/ Data through November 9, 1956.

2/ Crop year begins July 1 for flaxseed, August 1 for cottonseed, October 1 for soybeans, November 1 for tung oil, and January 1 for olive oil.

3/ Less than 50,000 pounds.

Compiled from CCC Report of Financial Conditions and Operations and CSS Operating Records.

1/ Statement prepared by Oils and Peanut Division, CSS.

Table 40.- Price support operations for oilseeds, 1947-56

Soybeans							
Crop year 1/	Support price 2/	Support price, percentage of parity	Price received by farmers 2/	Production	Placed under loan or purchased under support program		Acquired by CCC
					Quantity	Percentage of crop	
	Dollars	Percent	Dollars	Million bushels	Million bushels	Percent	Million bushels
1947	2.04	90	3.33	186.5	3.5	1.9	---
1948	2.18	90	2.27	227.2	11.0	4.8	10.7
1949	2.11	90	2.16	234.2	16.1	6.9	3/
1950	2.06	80	2.47	299.2	15.0	5.0	3/
1951	2.45	90	2.73	283.8	11.1	3.9	3/
1952	2.56	90	2.72	298.8	14.1	4.7	3.9
1953	2.56	90	2.73	269.2	31.8	11.8	3/
1954	2.22	80	2.45	341.1	41.4	12.1	15.5
1955	2.04	70	2.20	371.1	27.5	7.4	3/
1956	2.15	75		4/ 457.4			
Cottonseed							
Basis grade 100				As seed		Percentage of crop	As seed
Loan Purchase				5/		6/	As oil
Dol- lars	Dollars			1,000 tons	1,000 tons	Million pounds	Percent
1947	No program		85.90	4,682			
1948	No program		67.20	5,945			
1949	50.65	90	43.40	6,559	811.5	51.1	14.8
1950	51.00	73	86.60	4,105	---	---	---
1951	65.50	90	69.30	6,286	.5	136.2	6.8
1952	66.40	90	69.60	6,190	.4	875.0	43.1
1953	54.50	75	52.70	6,748	1.4	384.1	17.2
1954	54.00	75	60.30	5,709	.1	227.3	12.0
1955	46.00	65	4/ 44.60	6,038	---	---	---
1956	48.00	70		4/ 5,431			
Flaxseed							
				Million bushels	Million bushels		Million bushels
1947	5.75	160	6.15	40.6	.5	6.1	2.0
1948	5.75	143	5.71	54.8	26.5	95.0	57.1
1949	3.74	90	3.63	43.0	11.9	---	27.7
1950	2.57	60	3.34	40.2	1.0	---	2.5
1951	2.65	60	3.72	34.7	1.9	---	5.5
1952	3.77	80	3.72	30.2	5.5	---	18.2
1953	3.79	80	3.64	37.7	19.0	---	50.4
1954	3.14	70	3.05	41.3	10.4	---	25.2
1955	2.91	65	4/ 2.88	41.3	7.1	---	17.2
1956	3.09	70		4/ 51.9			
Tung nuts and oil							
Nuts, Oil, per ton, per lb.		Nuts, Oil, per ton, per lb.		Nuts	Oils 7/	Nuts	Oil
Dol- lars	Cents	Dol- lars	Cents	1,000 tons	Million pounds	1,000 tons	Million pounds
1947	8/ 72.00 25.0	---	64.90	53.4	16.0	---	7.8
1948	No program		49.10	58.5	17.0	---	7.8
1949	60.00 24.1	60	63.70 25.0	87.9	26.8	---	1.6
1950	63.00 25.1	60	111.00 36.7	36.5	12.3	---	---
1951	67.20 26.5	60	106.00 39.1	49.1	14.7	---	---
1952	67.20 26.5	62	79.80 28.6	132.1	43.4	---	5.8
1953	63.38 23.9	65	66.80 23.8	120.0	39.6	---	33.2
1954	54.96 21.2	60	59.40 23.3	51.0	15.1	.4	5.1
1955	51.06 20.0	60	4/ 64.00 24.6	6.2	4/ 2.0	---	---
1956	53.76 21.0	65					

1/ Beginning October 1 for soybeans, August 1 for cottonseed, July 1 for flaxseed, and November 1 for tung nuts and oil. 2/ Soybeans and flaxseed, per bushel; cottonseed and tung nuts, per ton. 3/ Less than 50,000 bushels. 4/ Preliminary. 5/ Cottonseed oil is crude basis. 6/ Percent that seed plus oil is of the production. 7/ F.o.b. south arm mill. Prices not available prior to 1949. 8/ Price processors required to pay for tung nuts in order to be eligible to sell oil to CCC. 9/ Less than 50,000 pounds.

U. S. STANDARDS FOR SOYBEANS 1/

The official grain standards of the United States for soybeans were revised effective September 1, 1955. The important changes were a reduction in the allowable foreign material by 1.0 percent in each of the numerical grades. Special limits on heat damaged soybeans in each grade were adopted. No change was made in the limits on moisture or in the color classification of yellow and green soybeans.

The reduction in foreign material from 2 percent to 1 percent in grade No. 1, from 3 percent to 2 percent in grade No. 2, and comparable reductions in grades No. 3 and No. 4 was the most substantial change. On this basis, the percentage of the 1955 crop which graded No. 2 or better was the same as in previous years. Early indications are that the 1956 crop soybeans as received from farms and country elevators contain a relatively high percentage of foreign material. In many cases most of the soybeans as a result are grading No. 3 or lower. Most export shipments (cargoes), however, grade No. 2, which, on the revised basis, is more acceptable to foreign buyers.

Data available from inspection records indicate clearly the feasibility of lowering the moisture limits by 1 percent in each grade. Reports still persist that soybeans with green seed coats, which are now classified as yellow soybeans, are objectionable for use in certain food products in Japan and in European countries. The introduction of yellow seeded varieties in areas where Ogden type soybeans are grown has greatly reduced the commercial supply of green-seeded soybeans. But there is still need for a change or refinement in the definition of yellow and green classes of soybeans.

There is also some demand for a change in the definition of foreign material or in the method of determining this factor to eliminate or reduce the proportion of small pieces of soybeans now included in foreign material. Definitions by other standards, such as the Incorporated Oilseeds Association, do not consider any soybean material as foreign matter. Thus, U. S. soybeans are at a disadvantage in world markets when judged by our standards in contrast to other standards. However, even when graded by other standards, U. S. soybeans still are not as clean as Manchurian beans.

The Grain Division, AMS, is making a study of this problem. It is not contemplated that any change in the soybean standards will be proposed for discussion during the current fiscal year.

1/ Statement prepared by Grain Division, AMS.

PRODUCTION ADJUSTMENTS IN SOYBEANS AND OTHER OILSEED CROPS 1/

Shifts in acreage and diversion of acreage from surplus crops have greatly affected the role of soybeans and other oilseed crops in the national cropping pattern of the last few years (table 41). Because of the joint and byproduct nature of most fats and oils, no group of farm products is more widely interrelated with other farm products.

Production of soybeans underwent phenomenal expansion during World War II in response to emergency demands, and the crop has continued to increase since the end of the war. In 1956, the acreage of soybeans was double that of 10 years earlier. During the last three years, diversion from allotment crops has contributed to this increase.

Examination of the regional shifts indicated in table 42 shows that the largest increases in acreages of soybeans since 1953 have taken place in the Corn Belt, the Lake States, and the Delta States. Shifts from wheat and corn apparently account for a large part of the recent increase in the Corn Belt. In the Lake States, acreages of wheat and oats have decreased and in the Delta States; diversion from cotton appears to be responsible for the rise in the acreage of soybeans.

The increase of 6.1 million acres in soybeans from 1953 to 1956 is the largest increase shown by any one crop, although it is followed closely by barley and sorghum grain. The 1.4 million-acre increase in the acreage of flaxseed is also substantial. This was mainly in the Northern Plains.

1/ Statement prepared by Production Economics Research Branch, ARS.

Table 41- Changes in crop acres from 1953 to 1954, 1953 to 1955,
and 1953 to 1956 1/

Crop	1953 to 1954	1953 to 1955	1953 to 1956 2/
	<u>Mil. acres</u>	<u>Mil. acres</u>	<u>Mil. acres</u>
Wheat.....	- 16.8	- 20.6	- 17.4
Cotton <u>3/</u>	- 5.5	- 7.8	- 8.3
Corn.....	+ 0.2	- .2	- 2.7
Rice.....	+ .3	- .3	- .6
Total 4 crops...	- 21.8	- 28.9	- 29.0
Oats.....	+ 3.4	+ 3.5	+ .6
Barley.....	+ 4.9	+ 6.7	+ 5.2
Sorghum grain <u>4/</u> ..	+ 4.6	+ 6.7	+ 5.2
Soybeans <u>5/</u>	+ 2.4	+ 3.8	+ 6.1
Flaxseed.....	+ 1.3	+ .6	+ 1.4
Hay, all <u>4/</u>	- 1.2	+ .6	+ .6
Rye.....	+ .7	+ 1.6	+ 1.2
Total 7 crops...	+ 16.1	+ 23.5	+ 20.3
Total 11 crops...	- 5.7	- 5.4	- 8.7
Total 59 crops...	- 4.3	- 4.4	- 8.2

1/ Planted acreage where available.2/ Preliminary.3/ Acreage in cultivation July 1.4/ Harvested acreage.5/ Harvested for beans.

Table 42- Changes in crop acres from 1953 to 1956, by regions 1/ 2/

Crop	North- east	Appala- chian	South- east	Lake States	Corn Belt	Delta States	Northern: Plains	Southern: Plains	Mountain: Plains	Pacific: States	United States
1,000 acres	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Wheat.....	- 570	- 418	- 13	- 790	- 1,680	- 42	- 8,003	- 3,075	- 1,780	- 1,065	- 17,436
Cotton 3/.....	---	- 740	- 1,676	---	- 183	- 1,998	---	- 2,661	- 451	- 573	- 8,282
Corn.....	- 3	- 517	- 343	488	- 484	- 136	- 1,589	- 317	24	163	- 2,714
Rice.....	---	---	---	---	4	- 261	---	- 162	---	- 137	- 556
4 crops.....	- 573	- 1,675	- 2,032	- 302	- 2,343	- 2,437	- 9,592	- 6,215	- 2,207	- 1,612	- 28,988
Oats.....	- 62	503	101	- 1,250	21	758	- 378	1,158	- 271	16	596
Barley.....	132	106	17	-	577	76	1,855	395	1,039	977	5,174
Sorghum grain 4/.....	---	41	62	---	142	63	1,625	2,535	674	70	5,212
Soybeans for beans 4/.....	167	316	150	1,403	2,682	1,213	198	5	---	---	6,124
Flaxseed.....	---	---	---	56	0	---	1,479	103	96	24	1,440
Hay, all 4/.....	- 22	43	220	- 148	- 871	- 73	985	366	- 221	319	598
Rye.....	99	3	35	19	370	---	559	- 22	48	85	1,190
7 crops.....	314	1,006	585	- 32	2,921	2,037	46,323	44,324	41,365	41,491	20,334
11 Crops.....	- 259	- 669	- 1,447	- 334	578	- 400	- 3,269	- 1,891	- 842	- 121	- 8,654

1/ States in each region are as follows: Northeast includes all States east of Ohio and north of Virginia; Appalachian includes West Virginia, Kentucky, Tennessee, Virginia, and North Carolina; Southeast includes South Carolina, Georgia, Florida, and Alabama; Lake States are Michigan, Wisconsin, and Minnesota; Corn Belt includes Ohio, Indiana, Illinois, Iowa, and Missouri; Delta States are Mississippi, Louisiana, and Arkansas; Northern Plains are North Dakota, South Dakota, Nebraska, and Kansas; Southern Plains are Oklahoma and Texas; Pacific Coast includes the 3 coastal States; and the Mountain States are all those between the Pacific Coast and the Plains States.

2/ Planted acreage where available.

3/ Acreage in cultivation July 1.

4/ Harvested acreage.

Table 43.- Fats, oils, including margarine and shortening, and tall oil: Production from domestic and imported materials, and factory and warehouse stocks at end of month

Items grouped by major use	Production 1/						Stocks	
	October-September		1955		1956		1955	1956
	1954-55	1955-56	September	August	September	Sept. 30	Aug. 31	Sept. 30
	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.
PRIMARY FATS AND OILS								
Food fats and oils								
Butter 2/.....	1,369.2	1,403.8	91.6	110.1	92.6	295.0	118.2	91.3
Lard and rendered pork fat 3/..	2,363.0	2,635.0	184.0	172.0	177.0	75.0	141.1	123.4
Beef fats	268.9	278.4	21.8	22.2	18.0	15.4	14.0	10.2
Total edible animal fats	4,001.1	4,317.2	297.4	304.3	287.6	385.4	273.3	224.9
Corn oil	268.4	269.8	22.6	25.0	21.6	19.5	23.5	22.5
Cottonseed oil	1,706.5	1,888.2	159.4	58.1	165.5	360.8	231.9	253.8
Olive oil, edible	3.2	.5	---	---	---	5.3	7.0	6.4
Peanut oil	19.5	78.1	.4	3.6	2.1	10.1	31.2	27.0
Soybean oil	2,711.5	3,142.6	206.4	249.0	221.3	179.9	254.6	226.5
Total edible vegetable oils ..	4,709.1	5,379.2	388.8	335.7	410.5	575.6	548.2	536.2
Soap fats and oils								
Tallow, inedible, and greases								
excluding wool grease 4/.....	2,824.6	3,114.7	245.2	245.9	238.7	260.5	318.9	306.3
Palm oil	---	---	---	---	---	20.9	21.0	22.3
Fish oil	180.3	198.6	27.5	39.3	22.0	66.1	64.7	81.0
Marine mammal oil	---	---	---	---	---	26.5	20.6	28.5
Olive oil, inedible and foots ..	---	---	---	---	---	5/	5/	5/
Cocunut oil	435.0	445.4	34.7	33.6	32.6	96.6	64.9	75.4
Total soap fats	3,439.9	3,728.7	307.4	318.8	293.3	470.6	490.1	513.5
Drying oils								
Castor oil, dehydrated	20.5	21.4	1.9	1.5	1.6	2.1	3.3	3.2
Linseed oil	588.0	624.8	61.4	18.6	46.9	93.8	96.6	101.4
Oiticica oil	---	---	---	---	---	6.7	6.7	6.1
Tung oil	15.1	6/	---	6/	6/	34.7	11.5	10.5
Total drying oils	623.6	646.2	63.3	20.1	48.5	137.3	118.1	121.2
Other industrial oils and fats								
Cod oil and fish-liver oils	1.8	1.8	.3	.1	.1	1.0	1.6	1.6
Castor oil, No. 1 and No. 3 7/..	34.2	8.9	1.1	.6	5/	40.8	38.8	34.4
Rapeseed oil	---	---	---	---	---	1.8	.7	.7
Other vegetable oils	40.3	31.1	4.8	4.7	5.9	42.0	30.3	29.5
Total	76.3	41.8	6.2	5.4	5.9	85.6	71.4	66.2
Grand total 8/ 2/	13,222.6	14,480.1	1,063.2	984.2	1,045.8	1,654.8	1,501.2	1,462.2
From domestic materials	12,732.9	14,034.5	1,025.4	948.5	1,011.7			
From imported materials	489.8	445.6	37.8	35.7	34.1			
FAT-AND-OIL PRODUCTS								
Shortening	2,038.6	1,810.7	158.4	150.6	133.4	140.7	141.6	129.2
Margarine	1,346.3	1,332.8	113.9	106.7	115.0	22.2	22.4	22.2
Mono-and di-glycerides (edible)..	79.9	80.5	6.7	6.0	6.3	2.8	3.3	3.4
Fatty acids	508.7	523.4	43.9	41.9	39.2	50.5	57.7	59.2
Tall oil	497.9	612.2	45.2	49.9	41.7	58.8	96.8	96.3

1/ Factory production except as otherwise noted.

2/ Creamery butter production and cold-storage stocks. United States Department of Agriculture.

3/ Total commercial. Excludes farm production. Federally inspected in October 1954-September 1955 totaled 2,049.4 million pounds, October 1955-September 1956 totaled 2,325.1 million pounds.

4/ Total apparent production, Agricultural Marketing Service. (Computed from factory consumption, trade and stocks.)

5/ Less than 50,000 pounds.

6/ Included in "Other vegetable oils."

7/ Production of No. 1 and No. 3 minus production of dehydrated castor oil.

8/ Computed from unrounded numbers.

9/ Includes estimated output of farm butter and farm lard, 372 million pounds in October 1954-September 1955, 367 million pounds in October 1955-September 1956.

Compiled from reports of the Bureau of the Census, except as noted. Data include stocks held by the Government in reported position.

Table 44.- Imports and exports of fats, oils, oil-bearing materials and fat-and-oil products in terms of oil

Item	Imports for consumption				Exports 1/			
	October-September:		1956		October-September:		1956	
	1954-55:	1955-56:	August	September	1954-55:	1955-56:	August	September
	Mill.lb.	Mill.lb.	Mill.lb.	Mill.lb.	Mill.lb.	Mill.lb.	Mill.lb.	Mill.lb.
Food fats and oils								
Butter (actual weight) 2/	0.7	0.7	0.1	3/	187.2	235.4	11.3	11.0
Lard	3/	---	---	---	527.7	662.2	40.9	38.1
Beef fats	.1	.7	---	.1	32.6	44.1	2.3	2.1
Total, edible animal fats	.8	1.4	.1	.1	747.5	941.7	54.5	51.2
Cottonseed oil 2/	---	---	---	---	709.1	611.6	22.4	30.9
Cottonseed (15.5 percent)	---	---	---	---	6.6	4.9	3/	3/
Olive oil, edible	57.2	49.4	4.3	2.0	---	---	---	---
Peanut oil	30.7	7.2	---	---	.6	2.1	.3	.2
Peanuts, shelled (43 percent)	---	---	---	---	---	---	---	---
Soybean oil	---	---	---	---	50.2	561.5	74.6	75.7
Soybeans (18.3 percent)	3/	3/	---	---	665.6	733.3	15.9	30.2
Other vegetable oils 2/	7.5	6.6	.5	.3	66.6	37.8	1.1	1.5
Total, edible vegetable oils	95.4	63.2	4.8	2.3	1,498.7	1,951.2	114.3	138.5
Soap fats and oils								
Tallow, inedible	1.4	1.4	---	---	1,106.2	1,349.8	118.6	111.3
Greases	2.2	1.0	.1	---	157.2	138.8	6.8	9.2
Fish and fish liver oils non-medicinal	16.3	11.6	.3	1.3	126.4	153.7	19.5	17.3
Marine mammal oils	49.5	36.2	.6	6.4	.4	.1	---	---
Foots and soap stock, including olive oil	2.3	1.2	3/	---	12.0	4.3	3/	3/
Palm oil	55.1	28.7	1.8	3.6	---	---	---	---
Total, slow-lathering oils	126.8	80.1	2.8	11.3	1,402.2	1,646.7	144.9	137.8
Coconut oil	147.3	180.7	27.0	11.4	9.6	5.0	1.2	.5
Copra (63 percent)	430.3	416.3	34.6	33.4	.6	2.0	---	---
Palm kernel oil	57.4	40.5	1.7	2.5	---	---	---	---
Total, lauric-acid oils	635.0	637.5	63.3	47.3	10.2	7.0	1.2	.5
Drying oils								
Flaxseed (35.4 percent)	3/	3/	---	---	132.5	196.1	12.1	7.4
Linseed oil	---	---	3/	---	220.0	109.6	.7	.7
Opticica oil	11.9	11.4	.6	.6	---	---	---	---
Tung oil	25.5	25.1	2.4	.7	3.5	.3	.1	3/
Total	37.4	36.5	3.0	1.3	356.0	306.0	12.9	8.1
Other industrial oils and fats								
Cashew nut shell liquid (oil)	8.5	8.8	.5	.9	---	---	---	---
Castor oil	89.0	90.0	6.2	3.5	1.1	.4	---	---
Castor beans (45 percent)	41.0	27.3	1.7	1.0	---	---	---	---
Fish-liver oils, medicinal	21.4	14.8	.7	1.8	.3	.4	3/	3/
Neat's-foot oil and stock	3/	---	---	---	.6	.2	3/	.1
Rapeseed oil	6.7	3.9	.3	.2	---	---	---	---
Wool grease	6.8	8.4	.8	.4	---	---	---	---
Other vegetable oils and fats, inedible	11.3	1.0	---	---	9.9	26.7	.6	3.4
Total	184.7	154.2	10.2	7.8	11.9	27.7	.6	3.5
Other products (fat content)								
Margarine	.1	.1	3/	3/	3.2	3.4	.3	.4
Shortening	3/	---	3/	3/	43.4	9.0	.6	1.3
Cooking and salad oils	---	---	---	---	3.5	---	---	---
Salad products	---	---	---	---	2.4	1.4	---	---
Soap	1.0	.9	3/	3/	14.4	15.4	1.3	1.2
Fatty acids	.8	.9	3/	3/	16.5	21.6	1.5	3.6
Total	1.9	1.9	3/	3/	83.4	50.8	3.7	6.5
Grand total 4/	1,081.8	974.6	84.1	70.1	4,109.9	4,930.9	332.1	346.2
Tall oil	---	---	---	---	57.6	41.9	3.9	1.2

1/ Includes re-exports of coconut, palm, and tung oils, olive-oil foots and copra. Does not include shipments. Shipments average about 80 million pounds per year of which approximately 55 million are lard.

2/ Includes exports from CCC holdings that are not reported by Census.

3/ Less than 50,000 pounds.

4/ Computed from unrounded numbers.

Compiled from reports of the Bureau of the Census, and the United States Department of Agriculture.

Table 45.- Index numbers of wholesale prices of fats and oils

Item	1947-49=100				
	October		1956		
	1954	1955	August	September	October
All fats and oils	73	68	69	69	73
All fats and oils, except butter	65	58	58	59	62
Grouped by origin:					
Animal fats	78	74	73	75	77
Vegetable oils, domestic	63	56	58	57	63
Vegetable oils, foreign	73	65	68	67	67
Grouped by use:					
Butter	86	86	86	86	90
Butter, seasonally adjusted	83	82	90	85	86
Lard	79	59	63	65	69
Food fats other than butter	71	58	62	62	68
Food fats other than butter and lard:	66	58	61	60	66
All edible fats and oils	79	72	74	74	79
Soap fats	55	58	51	53	53
Drying oils	65	58	61	61	63
Other industrial	57	57	54	56	57
All industrial	58	58	54	56	56
Edible vegetable oils, grouped by degree of processing:					
Crude	65	58	60	59	66
Refined	76	68	68	66	70
End products	84	80	85	83	84

All indexes except "Butter, seasonally adjusted" and "Other industrial" from Bureau of Labor Statistics.

Table 46.- Price received by farmers and prices at terminal markets for specified oil-bearing materials and oilmeals

Item	Unit	October		1956		
		1954	1955	August	September	October
		Dollars	Dollars	Dollars	Dollars	Dollars
Castor beans, Brazilian ports	Long ton	100.00	129.25	155.00	155.00	157.50
Copra, Philippines, c.i.f. Pacific Coast	Short ton	174.00	155.38	148.00	151.25	151.88
Cottonseed, United States average	Short ton	60.20	43.50	51.00	47.60	54.10
Flaxseed, No. 1, Minneapolis	Bushel	3.39	3.10	3.28	3.25	3.27
Flaxseed, United States average	Bushel	3.05	2.76	2.97	2.89	2.92
Peanuts, No. 1, shelled, Spanish, Southeastern shipping points 1/	100 lb.	24.88	18.62	17.38	17.75	19.25
Peanuts, United States average	100 lb.	11.60	11.80	11.60	11.50	11.60
Soybeans, No. 2, Yellow, Chicago	Bushel	2.74	2.24	2.56	2.28	2.30
Soybeans, No. 2, Yellow, Illinois country shipping points	Bushel	2.69	2.22	2.40	2.18	2.21
Soybeans, United States average	Bushel	2.54	2.08	2.33	2.07	2.07
Oilseed Meals 2/						
Copra meal, Los Angeles 3/	Short ton	60.95	71.40	72.25	74.25	73.50
Cottonseed meal, 41 percent protein, Memphis:	Short ton	69.10	55.10	63.10	54.10	55.50
Cottonseed meal, 41 percent protein, Chicago:	Short ton	78.15	66.30	70.90	66.65	66.80
Linseed meal, 36 percent protein, Minneapolis	Short ton	67.00	66.10	58.90	58.25	56.10
Linseed meal, 34 percent protein, New York ..	Short ton	83.00	82.25	74.85	75.15	73.90
Peanut meal, 45 percent protein, f.o.b. Southeastern mills	Short ton	76.50	62.50	56.00	53.00	55.90
Soybean meal, 44 percent protein, Chicago ..	Short ton	76.00	66.70	63.30	58.10	57.10
Soybean meal, 44 percent protein, bulk, Decatur	Short ton	65.25	56.00	52.10	46.90	45.70

1/ This price applies to peanuts for edible uses. 2/ Bagged carlots, except soybean meal at Decatur, which is bulk. 3/ Original quotations adjusted to bagged-carlots basis.

Compiled from Oil, Paint, and Drug Reporter, Daily Market Record (Minneapolis), Wall Street Journal, Chicago edition, reports of the Agricultural Marketing Service, and records of the Commodity Stabilization Service.

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